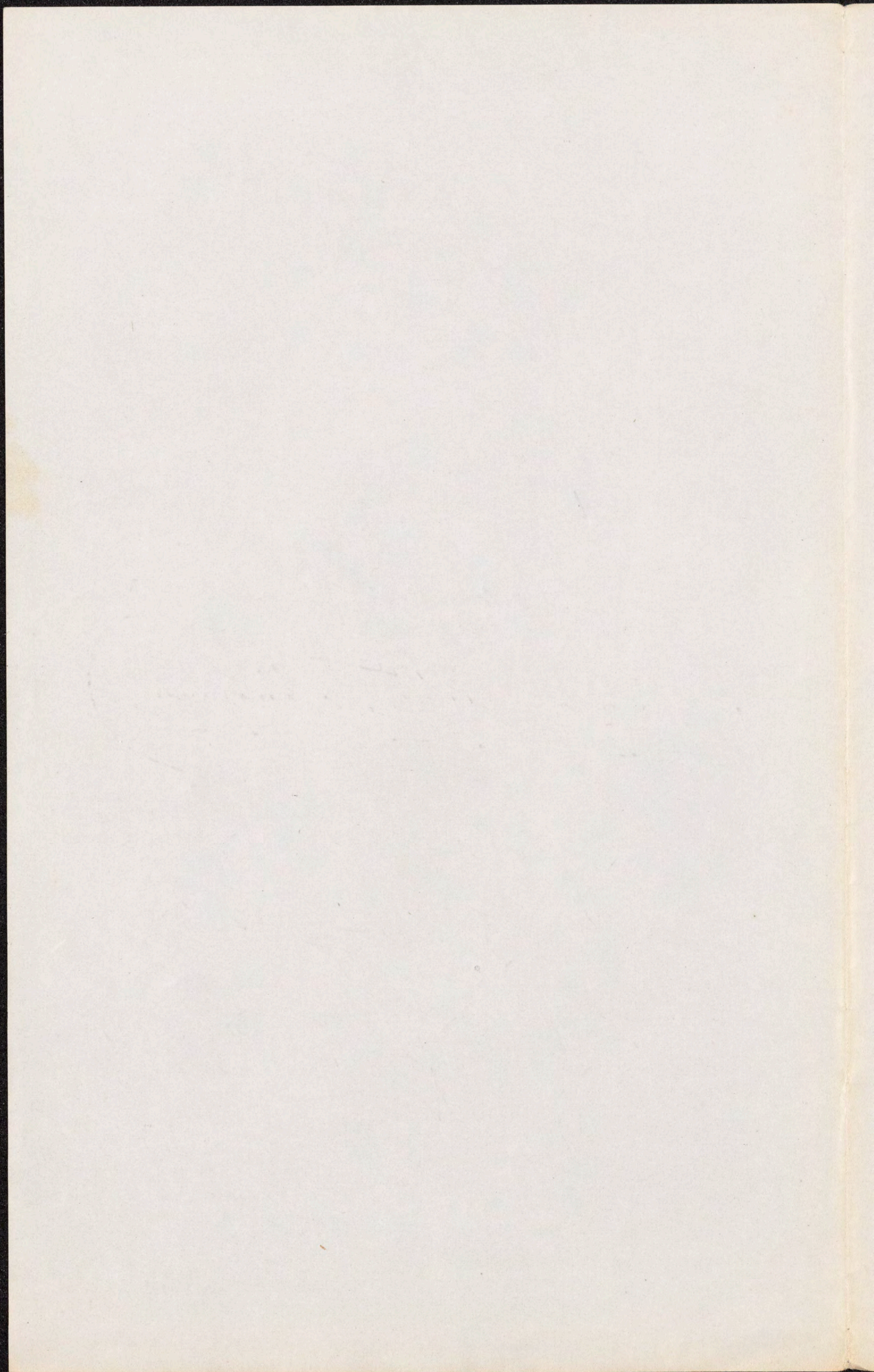


Hymene of  
Infancy & Childhood  
(See other notes.)

~~Of Sick Room  
Of Professional Life.~~

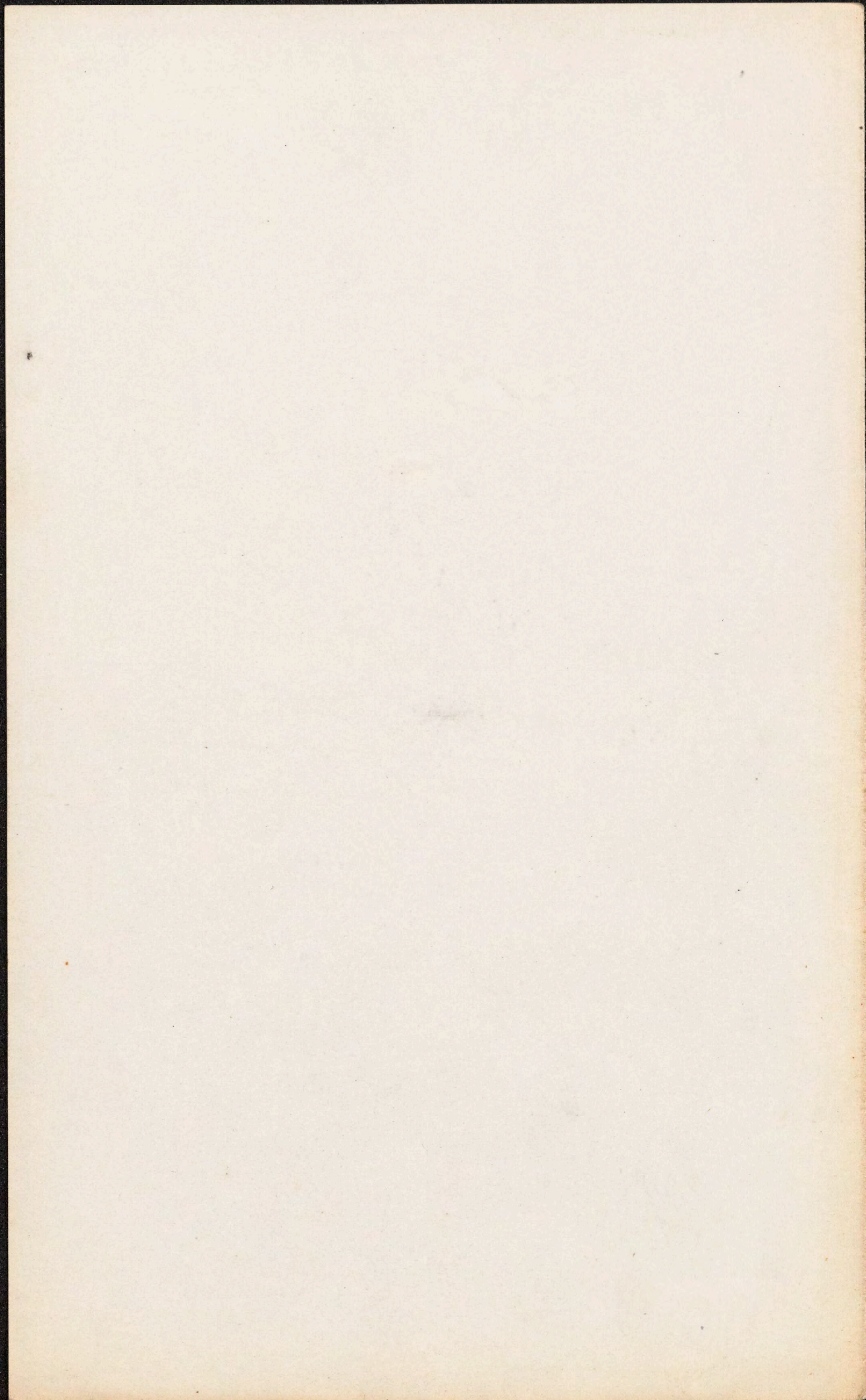














(See Edlton.)

Hospitals,

Prisons

& Ships.



Nightingale

Galton

Johns Hopkins "Hospital Plans."

(Hammond's Hygiene)



~~W.A.~~ 18<sup>th</sup>, 19<sup>th</sup> papers missing

Diagrams -

about Ventilation -

X

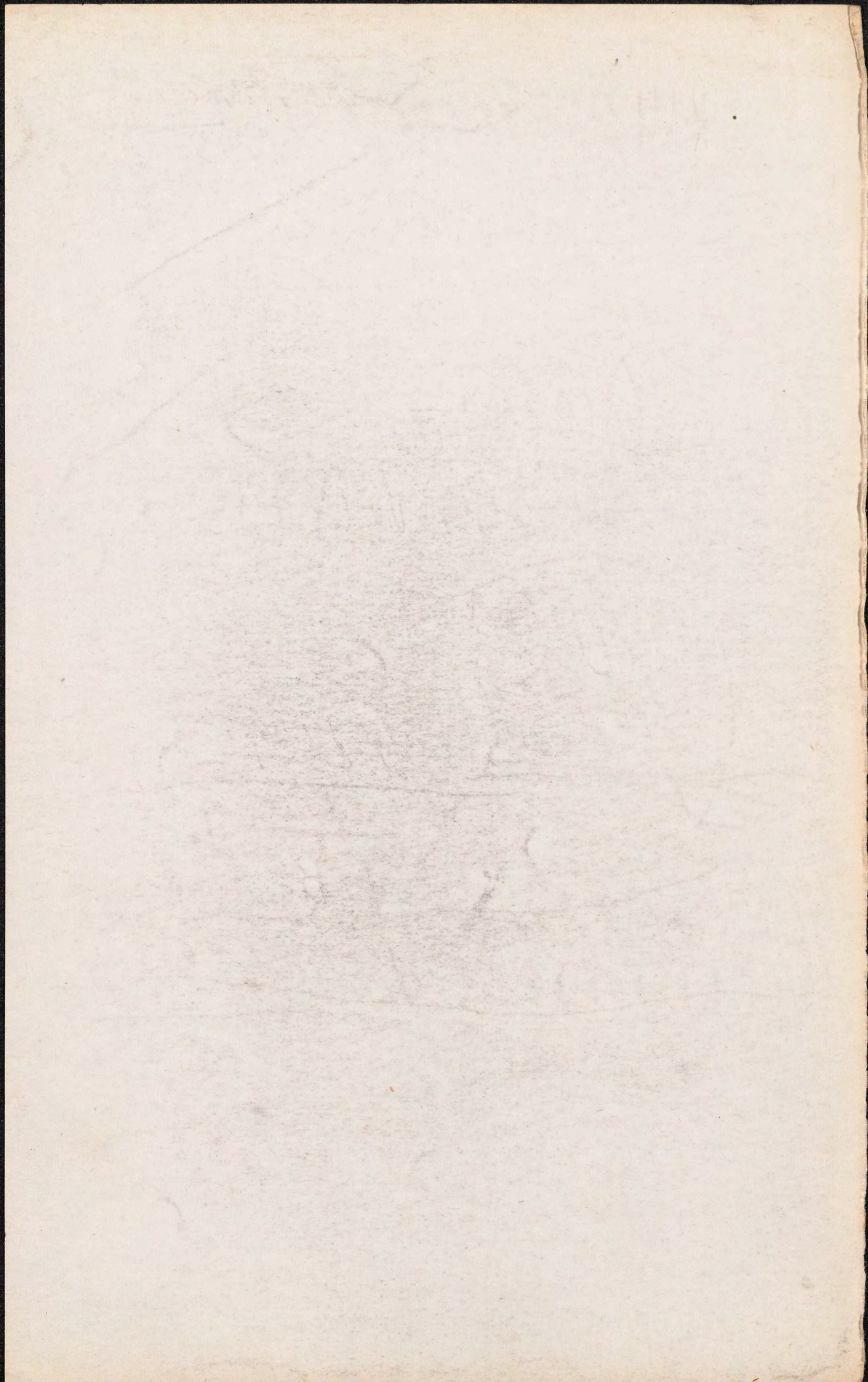
Hospitals -

& mortality of Hospitals.

~~Borrow model of Barkess~~

~~ventilator, from Franklin Institute~~







Model Hospital Ward.

Length — 80 feet.  
Width — 25 feet  
Height — (16?) ~~20~~ ~~23~~ feet  
(Ordronaux says the higher the better.)  
Beds — 20 to 32  
Windows — number, 12  
Height of Windows ~~10~~ <sup>18</sup> feet.

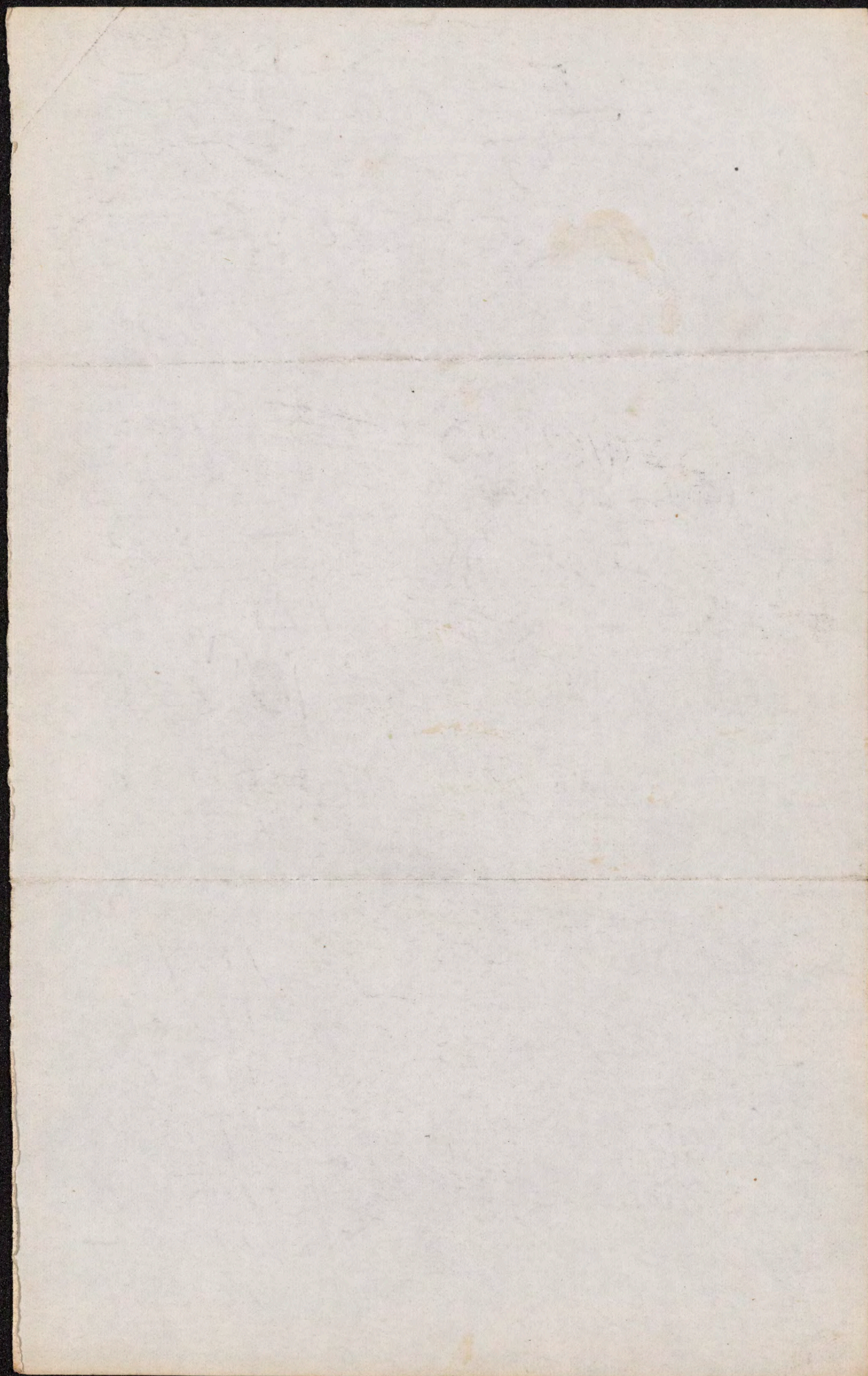
Mortality of Paris Hospitals.

From 1853 to 1863.

	Per cent.
Lariboisière	11.7
Pitié	11.91
Beaujon	11.73
Charité	9.50
Hôtel Dieu	10.54
Necker	11.02
St. Antoine	10.39
Vienna General Hospital,	12.6

London Hospitals  
over 9 per cent.  
Common Hospitals  
8 per cent.







Hospitals (name) - Constantine nosocom  
Paula + Brunel

Christie: - Laura & Merchant  
for silk & R

History } Bond, Louis XIV, 6 or 8<sup>th</sup> ed, Hotel D.

J. Howard - 1843 - Z. Nightingale - Salt - J. Hoppe

Reforms  
Gula, Belgium

Unit - ward:- its requisites -

Situation: — 80 p. on the ground  
Blng: — Square: — Octagonal.

From: low early must the narrow, for sunshine.

Size: — 20 to 32 p.  
height: — 20 ft. Tolson etc.  
Floor: — walls & roof  
100 sq. ft. each p. <sup>no</sup> carpet.  
15 sq. cub. ft. space over <sup>minimum</sup>

Wings: - beds: - appendages: -  
4 to 5 fr. between

warmy: - ventilation, -

Combination — One, or two stones?  
Buln, 25, 22, 21, 22<sup>+</sup>, 28.

Never more; with eternal content Dattic -

nurses for patients. — special rooms also —

Plans — (Diagrams) —

Limit of zone, 600 beds; better 400 (J. Heph.) or less.

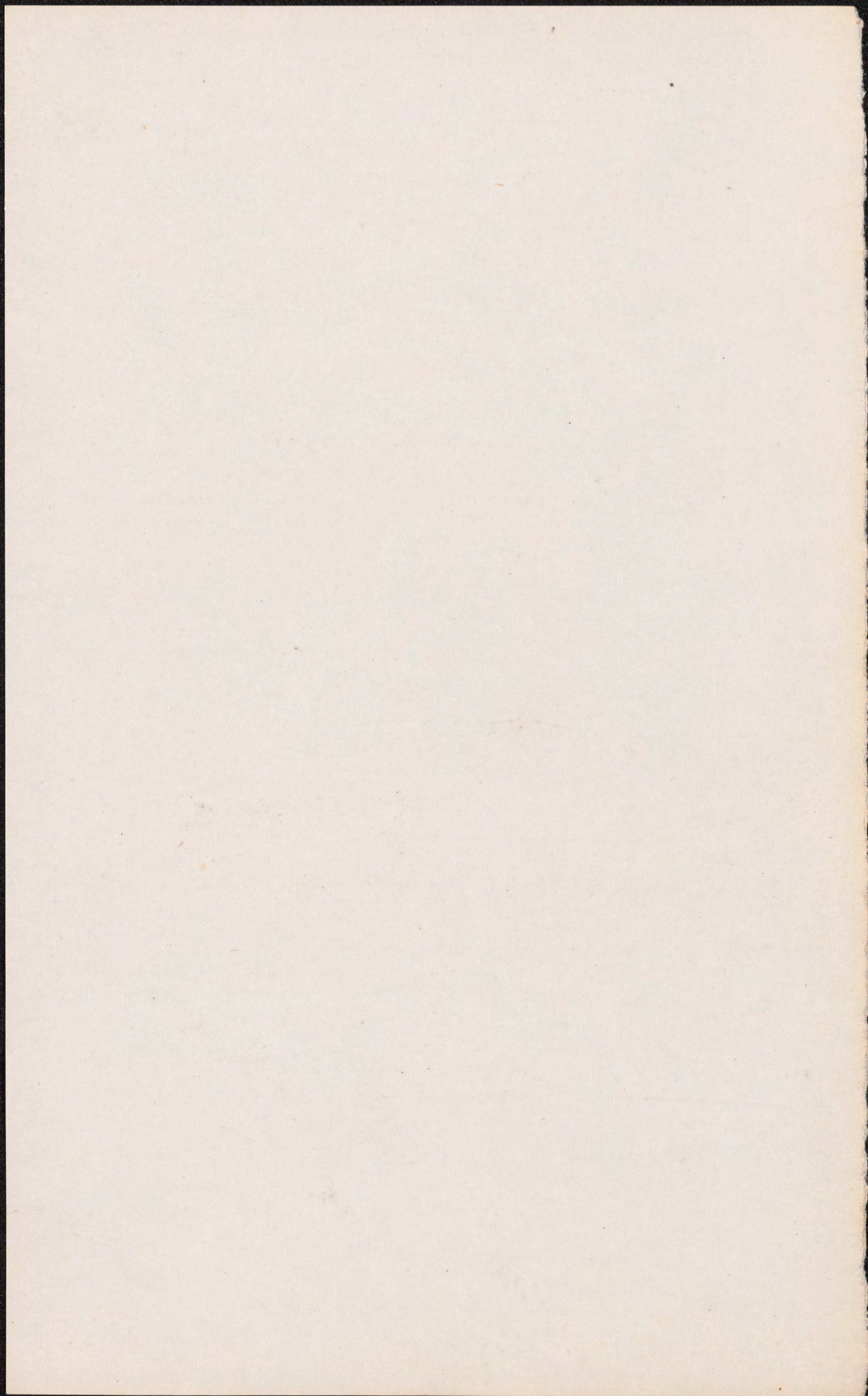
construction  
Cost - \$2500 per bed room to (iron, Englin) \$100 ditto.

Hospitalism — Mortality of Hospitals.

Points on Hospital Plans —

Summary Conclusions.



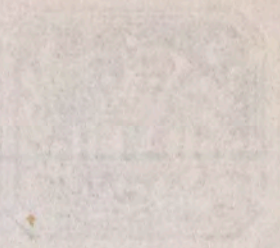




~~some~~ We must now <sup>take up</sup> ~~glance~~  
~~with~~ ~~feared~~ ~~on my part of not~~  
~~doing~~ full justice to it, at the  
important topic of Hospitals  
other arrangement.

The Hospital is emphatically  
a Christian institution. With  
personal <sup>integrity</sup> (fidelity & purity) comes  
the fidelity & patronage, as  
<sup>make</sup> them ~~loyal~~ ~~deal~~ of duty.  
The pagan ancients could not  
did not recognize that human-  
ity — or beneficent duty toward  
man as man <sup>which is</sup> taught by our  
religion.







Dispensaries

rope. These institutions are of much more recent origin than hospitals, yet the first of the latter (at least, of which we have any record) was not established until A.D. 460. This was founded by Nonus, a benevolent bishop, at Edessa, in Mesopotamia, a place which then contained a famous school of theology. Such an institution was entirely unknown among the Greeks and Romans, notwithstanding their high culture and civilization; and even in the first centuries of the Christian era, so far as is known, there was none in existence. The first hospital in Europe was founded at Rome, in the latter part of the fifth century, by a lady named Fabiola. In the sense, however, in which we understand it,—an institution devoted exclusively to the reception and care of the sick,—the hospital cannot be said to have existed until the eleventh century; and it was not until five hundred years later that the first dispensary was established,—an act of philanthropy for which the world is indebted to a woman. In the year 1559, the wife of Christopher, the reigning Duke of Würtemberg, caused an apothecary's shop to be erected in the ducal palace at Stuttgart, for the purpose of supplying medicine to the poor; and this she maintained at her own expense.

The dispensary as a permanent institution was established in England towards the close of the seventeenth century; but in France not until 1803, when the Philanthropic Society of Paris set in operation five dispensaries in that city. In 1805 an act was passed by Parliament providing for the establishment of dispensaries throughout Ireland, as well in the most sparsely-settled regions as in the cities and populous towns. In 1836 there were four hundred and ninety-four of these institutions in existence; and in 1851 their efficiency was very greatly increased by a second act of Parliament in reference to them.

It appears that to Philadelphia belongs the honor of establishing the first dispensary on this continent, in 1786. The New York Dispensary, which was founded in 1791 and incorporated in 1795, was the first in this city, and there are now about thirty here. The first one was organized in Boston in 1796. As a rule, our American dispensaries are said to be better than those of Europe.



[May 13, 1870]

come a member. Since the passing of the Medical Act, this has been abolished; but the membership of the College is essential to the holding of an appointment at any hospital of high standing. No matter where the aspirant to a hospital appointment has graduated, he must pass the examination for membership. This is a very fair and honest examination of an all-round character, including clinical examination in the hospital wards. It retains so much of its ancient character that each examinee, after having done a written examination in Latin, etc., has to stand up and read a passage from some Latin author to the President, and translate it before the other examiners, during his *viva voce* examination. Having thus put their seal upon him, the College guarantees his proper behavior, and calls offenders before its council, and reprimands and fines them according to the sum of their offences, or, if necessary, strikes them off the roll. Further, it exercises a moral control over its members, in that, if any one of them so conducts himself that he cannot be censured, and yet cannot be approved of, he is denied the Fellowship. There are some very successful physicians in London, who will never attain the F.R.C.S., even if they were to seek it in sackcloth and ashes. Consequently, the movements of the College of Physicians always attract attention, at least among the leading men in the metropolis.

In his Croonian Lectures, Dr. Dickenson relates a curious case of congestion of the kidneys, brought on by a cold drive over a Yorkshire moor, where the swelling induced was so great that the capsules of both kidneys were rent, and a massive coagulum of blood was found in the gaping tear. In this case the pain in the loins was so great that it was supposed there must be a renal calculus.

The discussion on Syphilis, at the Pathological Society, commenced by Mr. Jonathan Hutchinson, seems to have met the fate of most matters discussed there, viz.: to have left everybody pretty much where they were before. Mr. Hutchinson holds the one-poison theory, and thinks that though soft sores are usually free from any tendency to infect the system, if the matter which produced the sore contained syphilis poison,—just as corn may contain some poppy seeds, and when



~~Pauline of Rome, friend of the Emperor, founded the Hospital,~~  
the number & magnificence of  
nosocomia founded by <sup>Emper.</sup> Constantine  
for the care of christians mutilated by  
the tortures of the preceding reign,  
impressed men of the mind of the  
Crusaders. — Brunehaut, <sup>②</sup>Queen <sup>①</sup>is credited  
by French medical historians with the origination of



the first and institution of France.

The Hôtel Dieu is asserted to be  
the most ancient (now nearly) hos-  
pital of Europe.

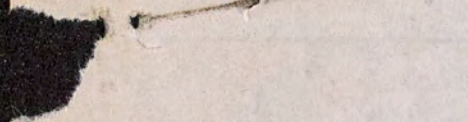
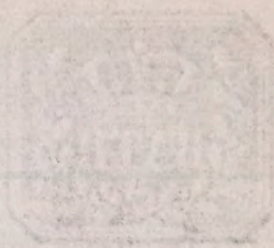
Under Louis XIV,  
the number of the sick became so great, that  
it was necessary to place six, or even eight,  
in a single bed!



At least, although the  
care of the sick poor met  
with some official attention a-  
-may the ancient Romans & others -  
very much from reasons of pruden-  
tial necessity - It is to Paula,  
a Christian lady, a friend of  
~~St.~~ Jerome, that the credit is  
given by historians of founding  
~~the first hospital~~ <sup>the first</sup> ~~the 4th century~~ <sup>the 4th century</sup>, (or before of 5th)  
the first hospital for the sick  
at Rome.

The name hospital (from  
hospes - a host or guest -  
whence hospitality) included once  
in its meaning the reception & care  
of others than the sick. In London,







even now, Christ Church Hos-  
pital is <sup>chattel</sup> a school estab-  
lishment for poor children. —

Before the beginning of the <sup>present</sup> century,  
hospitals were, as described by

Pringle Dothens (Brooklyn Daily)

so badly constructed & managed that  
they were more of a curse than

a blessing. <sup>Bellvue Hospital, New York,</sup>  
has been pronounced so quite lately, 1873.  
"No recovery after amputation of the thigh."

John Howard tried to reform  
hospitals as well as prisons; but  
could not effect much.

Later Italy & Bel-  
gium made the honor of com-  
mencing important improvements.

(Robt Jackson - Union - Robertson)

X See Woodworth's Marine Hospital Report, 1873.



Q Some of the best ideas concerning  
improvement of Army Hospitals were  
given forth by an American Army Surgeon  
Dr Jas. Tilton, in a pamphlet published  
in 1813. This gentleman was one of the  
earliest graduates of Univ. of Pennsylvania & a  
Surgeon of the Army of the Revolution; in  
which, under experience, he arrived at some  
conclusions which were in advance of his period.

+ ~~Tilton~~  
Johns Hopkins  
Hospital plans.




But the great genius  
for the sort of reform has  
been, Florence Nightingale.  
Her book, Notes on Hos-  
pitals, is classic. It was  
first issued in 1859; read the  
year before at the Social Science  
Association. Those who want  
to understand this subject well  
must read her book. <sup>(+ D. Hammond)</sup>  
~~when Hammond's also especially good on hospitals.~~  
I can only try to sum up the  
main principles here.

As D. Hammond observes,  
every hospital is a sort of polyph, or  
compound of units — the unit being a ward.



End of 2<sup>nd</sup> Lecture, 1873



 A ward is a room to lodge a certain number of sick or injured persons.

Where should it be —  
what size & shape should  
it have. — what arrangements —  
& lastly — how many of such  
wards — as units, can be with  
advantage put together — &  
how? —

First, where?

Nightingale says well  
that it is vain to try to make  
any hospital healthy, by ven-  
tilation &c, whose site is insalubrious.





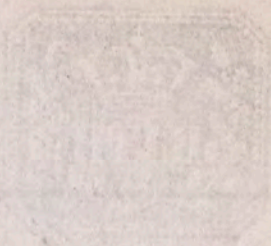


For convenience, it seems  
often necessary to have hospitals  
near, or even in cities; but  
that nearness is <sup>at</sup> a sacrifice of  
healthiness to convenience.

As to construction, the  
cardinal principles to hold up  
are <sup>(mightily)</sup> — 1. That the sick should  
be distributed over ~~the~~ as large an  
area as possible, and each sick  
man should be as far removed as  
possible from his neighbor.

2. The sick should be placed  
in small detached and perfectly  
ventilated buildings, so that there  
shall be no possibility of the polluted  
air of one ward passing into another.







disparagement of the bravery of the Northern troops, but a conviction of the lack of capable officers to guide them, while the superiority in this respect of the Southern generals is the theme of general conversation.

Bad management at head-quarters, *i. e.*, at Washington, is also alleged as the cause of numerous disasters and reverses to the Federal arms. It is impossible to make any one believe just now that the Government at Washington is actuated by any motive except the prolongation of its political exist-



Medical Director HAMLIN says that the statistics of the hospitals of this Department, for the last year show a remarkable result, giving a ratio of mortality of even less than four per cent., while the splendid hospitals of London exhibit a mortality of more than nine per cent., and those of Paris more than nineteen per cent. The hospitals of the Bosphorus, during the Crimean war, had a death rate of nearly twenty per cent., and those of the Crimea of more than fourteen per cent.



Persons desirous of purchasing the new bells for the Cathedral, are requested to leave their names with Mr. Walsh, at the Cemetery office, SUMMER Street east of Eighteenth. They will be communicated to the Committee, who will meet at the Bishop's residence every Tuesday and Friday evening, at 7½ o'clock, until further notice.

The following gentlemen have kindly consented to act as the Committee: Francis A. Drexel, A. J. Antelo, Wm. Maroney, Charles McKeone, Daniel McDevitt and M. J. Dohan, Esquires. mh13-6trp?

**M**RS. M. M. WOOD, CLAIRVOYANT PHYSICIAN, Trance and Writing Medium. Residence 1505 ELLSWORTH Street. Can be consulted from 10 to 10. mh13-3trp\*



One hundred and eighty-two hospitals, with a capacity of eighty-four thousand four hundred and seventy-two beds, were in operation at the date of the last annual report. During the summer campaign, it was found to be necessary to establish additional ones, and increase the capacity of those nearest the scenes of active operations, giving one hundred and ninety hospitals, with a capacity of one hundred and twenty thousand five hundred and twenty-one beds on June 30, 1864. During the year the health of the entire army was better than is usual with troops engaged so constantly on active duty and in arduous campaigns. No destructive epidemics prevailed in any section, and the



When a hospital is all  
in one building, — the smallest  
<sup>opening</sup> for infection diseases — wounds — &  
is the best: when of a number  
of detached wards, the size of  
the whole collection <sup>of them</sup> the hospital,  
may depend on convenience of ad-  
ministration. That was the  
principle upon which Surgeon-  
General Hammond proceeded in  
organizing the immense army hos-  
pitals needed during the late war —  
such as that at Chestnut Hill  
near Philadelphia; — by  
the establishment of which he rendered  
a <sup>very</sup> great service to the <sup>country</sup> ~~not~~  
~~well remembered yet.~~



Holston recommends a ward 14 ft high at walls,  
with slope ceiling 20 ft to ridge.

Ordinary says "the higher the better."

2 wards in Massachusetts Gen. Hospital now 20 ft to ridge.  
About 100 sq. ft. per bed floor space

More if clinical instruction - (Eaton)

A low ceiling requires a narrow  
ward, to allow the sun to act  
throughout the whole ward daily.  
With a high ceiling, there is no real  
need of narrowness: "dead air" in the middle  
is a myth. Windows, for the same reason,  
should be very near or quite as high as the  
ceiling. Let no ward have a width more  
than twice its height.



number of sick and wounded, although large, comparatively small in the proportion it bore to the whole army. At the close of the year, the number of sick and wounded, both with their commands and in general hospitals, was less than sixteen per cent. of the strength of the army. The number sick with their respective commands was four per cent. and in general hospitals five and three-tenths per cent. of the strength. Of the six and forty-six hundredths per cent. wounded, nearly one per cent. were with their respective commands, the rest in general hospitals.

The establishment of medical depots within reach of armies in the field, and their prompt supply upon the field of battle; the transportation of sick and wounded by ambulance, railroad and hospital transports; the sufficiency and successful administration of the best system of general hospitals; the sanitary precautions, as well as all minor details of this department tending to the greater comfort of the sick and wounded, as well as to the health and efficiency of the troops, have during the year undergone the severest possible test, and in no instance have the movements of successful generals been impeded or delayed from any cause within control of the medical department.

House bill No. 543, The eighteenth Congress, having

and the House of Representatives



**GOD! GRANT! VICTORY!**

**EIGHTH UNION LEAGUE REGIMENT**

**ALL THE BOUNTIES PAID ON BEING  
MUSTERED IN.**

**Do Not Wait to be Drafted.**

**Veteran Soldiers**  
their men



According to <sup>hitherto</sup> ~~now~~ generally accepted views,

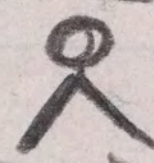
~~The~~ ward should be oblong;  
for a model — 80 ft long,  
25 broad, & at least 16 ft

~~7~~ 6 in — 10 ft

high — as much more as can  
be, in my belief. — I should say 20 to 25 feet at least.

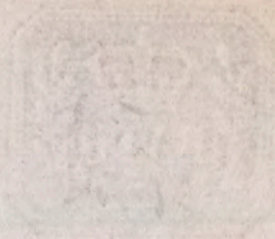
ward should hold 20, or from  
that to 32 patients. — Two

rows of beds — one <sup>row</sup> for each side  
wall — with a window for each

two beds. — broad window <sup>10 to 15 or more</sup> ft  
Folsom's square & Miernitz's oblong wards.   
in length or height.

Ridge ventilation in summer,  
in one-story <sup>parlor wards</sup> —  
stove shaft in winter should be  
obtained, — air coming in from  
under the floor. — The floor should  
be raised by a basement <sup>or pillars or arches</sup> 3 ft or  
more from the ground.







The best way for a ward to  
run is, its length, N. & S.,  
so that the sun will reach  
both sides every day.

At one end of the ward  
(Plan) — may be  
the nurses room — Kitchen off out.

At the other — Washroom on  
one side, & latrine & urinal  
on the other — with ventilated  
lobbies between.

Such is the ward unit.

Now, putting them together, to  
form a hospital — what may be



^ In 1875, word came from Paris of  
the upper stories being just taken off from  
two wings of the Great Hôtel Dieu Hospital  
Notes out

I am sorry that our <sup>fine</sup> University Hospital  
~~so far~~, does not <sup>quite</sup> correspond <sup>as yet</sup> to the perfect  
ideal of a Hospital. Convenience and  
economy excuse, only, what sanitary science  
and experience do not, <sup>in my opinion,</sup> recommend.

The best possible administration  
may command the best results.

II



CURIOUS VITAL STATISTICS.—Dr. Schwalbe has collated the vital statistics of Berlin in a curious way, and gives the following results: The death rate among those living in the cellars of Berlin was 25 and a fraction per 1000; among those living on the ground floor 22 per 1000; among those on the first floor (or what is generally called here the "second story") 21 and a fraction; among those in the next story above about the same, but a little higher rate; among those on the third floor (fourth story) over 22 per 1000, and in the highest story 28 per 1000. The situation of the "living apartments" would, from these returns, appear to determine the death rate of the inhabitants; yet it is only one of many influences. Those who live either in cellars or garrets in crowded cities are the very poor, who are subject to great privations—those whom vice has ruined or disease has weakened. They are not only at a physical disadvantage when compared with those who live on the ground floor or in the second story, but when attacked by disease they are too poor to pay for the medical attendance and treatment which help to reduce the death rate of their more fortunate neighbors. Damp cellars and badly ventilated garrets help to increase the death rate in these places, but the predetermining cause of both the death rate and of the situation of the "living rooms" is the poverty of the occupant.



to the President of the Convention, stating that he was no longer a candidate for Governor, was then read. Hon. John Ritchie of Frederick, nominated Hon. William T. Hamilton, of Washington. The nominations were declared closed, and Hon. John Lee Carroll was nominated on the first ballot, receiving 60 votes, Mr. Hamilton receiving 50. Mr. Carroll's nomination was then made unanimous.

Levin Woolford, of Somerset, was nominated by acclamation for Comptroller of the Treasury. He is the present incumbent of that position.

For Attorney General, C. J. M. Gwynn, of Baltimore City, was nominated.

The following platform was unanimously reported by the Committee on Resolutions, and unanimously adopted by the Convention:

First. We do hereby declare our unfaltering devotion to those cardinal principles of republican government enunciated by Thomas Jefferson in language so clear that it cannot be improved, to wit: "Equal and exact justice to all men of whatever State or persuasion, religion or political; the support of the State Governments in all their rights as the most competent administration for our domestic concerns, and the surest bulwarks against anti-republican tendencies;" the preservation of the General Government in its whole constitutional vigor, as the sheet anchor of our peace at home and safety abroad; the supremacy of the civil over the military authority; economy in the public expense, that debt may be lightly burdened; the honest payment of our debts and the sacred preservation of the public faith; the diffusion of information and arraignment of all abuses at the bar of public opinion. Freedom of religion



Dr. Edward Cowles, the Superintendent of Boston City Hospital, read a paper on the Treatment of the Sick in Tents and Temporary Hospitals. The reader held that recent observation and experience had shown that more favorable results were obtained from the treatment of patients in temporary structures than when they were placed in regular hospitals. He contended that it was a mistake to spend vast sums of money to erect costly and magnificent buildings, when a much less amount could, with far greater advantage to the patients, build a hospital with a view to its removal in a few years. He showed a diagram, and gave an account of the structure of the tents in use at the institution with which he is connected.

In the discussion which followed, several members coincided with Dr. Cowles in the views he had advanced, and related their experience in the late rebellion in confirmation.

II

1874



He alluded to the changes

course of study at the Harvard Medical School, insuring a better education to its students than under the old system, and that its graduates would enter upon their professional work with a better preparation, therefore, than had been possible before. Reference was also made to the trial and expulsion of the homœopathic members, as a vindication by the Society of the principles and purposes for which it exists. As to the admission of female practitioners, they had themselves settled the question by putting their school into the hands of the homœopaths.

Toasts were given and speeches were made by the Chaplain of the day, Rev. Mr. King, of Roxbury, by Dr. Allen, by Dr. Colting, the President elect, by Dr. Parker, formerly of China, Dr. Green, of Boston, etc., etc. Dr. Stone, of Wellfleet, read an original and humorous poem.

Thus ended a very pleasant session of this venerable



What should not be done?

Dr Hammond & others

object to 2 & 3 stories  
hospitals; they are objectionable.

The 2<sup>nd</sup> story is good, a well,  
most salubrious — at least so,

<sup>^</sup>  
Lamborne is 2 stories

Old Penna Hospital &  
<sup>that at</sup> Philada — & German Hospital  
& Episcopal; but theoretically  
this is not so desirable. The

~~new~~ U.S. General Hospital all  
at architect Philada, Secretary, &  
One story, — An attic, for  
storage &c — over a yard is a good thing in  
our hot sunny climate — unless in the shade of  
trees.



of this city was  
The plan of the ~~new~~ Episc. Hospital, ~~improved~~, in  
a sanitary sense, by what is architec-  
turally an ornament, and otherwise ful-  
ly in keeping with the purposes of its  
constructors; viz., the Chapel between  
the pavilions.



In some London Hospitals and in the  
Royal Infirmary of Manchester

January 16, 1875]

MEDICAL

preserved that not a scratch or other blemish was visible.

Such floors are easily cleaned, impenetrable to moisture, and can be kept in perfection with but little and unskilled labor. If there is a single objection to them, it is that they are so slippery that there is great liability to fall on them; and I recall the guarded manner in which I walked over them.

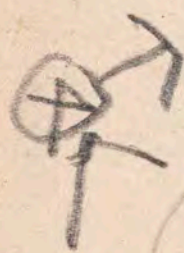
The advantages of these enamelled floors in a hygienic view are apparent, and the appearance of the wards is rendered very attractive by them.

This hard and polished surface is produced by the simple process of occasionally *rubbing* them with a mixture of ordinary *yellow wax and turpentine*. The proportions of the combination do not seem to be very important, but enough turpentine is added to melted wax to give the mixture a very viscid consistence when cold. The rubbing is performed with woollen cloths on which a small quantity of the mixture is spread. The cloth is wrapped around a block of wood that is furnished with a long handle, so that the operator stands erect whilst at work.

This light work of polishing almost supersedes the more laborious duty of scrubbing the floors, and it can be performed by ordinary attendants or may be a light exercise for convalescent patients.

I commend the process as worthy of general adoption in the hospitals of this country.

R. J. LEVIS.



Butler Enamelled? Hospital Floors.



existence until they have been weaned." We are assured that this assertion "is a simple fact." All we have to say in comment is that as the human conscience may be annihilated by repeated crime, so does it seem to us the human intellect may lose the divine power of distinguishing truth from falsehood by being employed upon the work of a partisan temperance lecturer. We sincerely hope Dr. Edmunds's book may have some influence in arresting intemperance, but certainly cannot think our readers will ever want to peruse more than one page of it.

THE DISEASES OF THE STOMACH. By WILSON FOX, M.D. H. C. Lea, Philadelphia, 1875.

This is a reprint of the third English edition of the *Diagnosis and Treatment of the Varieties of Dyspepsia*, a not absolutely fresh work, since the author's preface is dated October, 1872. This "third edition" was really in a considerable degree a new book, since, besides minor contributions, articles on ulcer and cancer of the stomach were added. These chapters, while containing nothing that is new, are well-written résumés of our knowledge upon the diseases of which they severally treat, and contain an elaborate bibliography of the subject. Dr. Fox seems to be ignorant of the great value of turpentine in some cases of chronic ulcer not attended by hemorrhage, and we think underestimates the value of nitrate of silver.

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## GLEANINGS FROM OUR EXCHANGES.

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KOUMISS (*The Peninsular Journal*, December, 1874).  
—Mr. E. C. Saunders quotes Dr. Jagielski of P  
that the acti



⊗ As to arrangement — the  
worst is the closed square  
esp<sup>ecially</sup> if the buildings are  
large & high & the square  
small.

Septic Pavilions  
are now universal & preferred:  
corrected, if at all, only by  
open, tho' they may be covered  
corridors. \* no pavilions should  
be nearer to each other, & parallel,  
than twice the height of either.

But they need not be parallel.  
[Plans — Herbert — Lincoln — Boston Tree — ]



Meter is 39.37 in.

Cubic meter, 1.308 c. yards



At the Massachusetts General Hospital there was a surgical visit, with operations. Opportunity was also given to inspect the two new wards, the Warren and Jackson, which have been recently opened. They are thus described in the last report of the hospital: "These structures are modelled somewhat upon the plan of army field-hospitals, with such modifications as climate and greater permanency require. The dimensions are forty-five by fifty-five feet, by fifteen and a half feet high to the eaves. Frames and outside walls of iron; high-pitched trussed roofs, at apex of which are ventilators, ten feet square, with chimney-stacks in centre. They are connected with the main hospital by corridors. Warren ward is one story high, without interior divisions, forty-four feet square inside, sixteen feet high at walls, and twenty-two and a half feet high in centre; arranged for twenty beds, allowing about one thousand eight hundred and forty cubic feet of space to each bed." Windows are arranged upon three sides, and so open as to allow a circulation of air without a direct draught upon the beds. For heating-purposes, a chimney-stack is placed in the centre of the ward, on two opposite faces of which are open fireplaces, and on the other two open Franklin soapstone stoves. Steam radiators, hung beneath the floor, and supplied with fresh air from without, also assist in heating. "A glazed door opens upon a platform in the south front, over which is to be an awning in hot weather. Jackson ward is similar in construction and dimensions, excepting that the interior is divided into eight rooms, each twelve by eighteen feet, fifteen and a half feet high, containing three thousand cubic feet of space, and of sufficient size for two beds each. Each room has an open Franklin soapstone stove. The ward is divided by a centre and a cross corridor, twenty-one and a half feet high, which, as well as the rooms, are connected with the large ventilator in the roof."

Too low

Better

At the City Hospital there was also a surgical visit, with operations. Of great interest was the exhibition of patients in the two tents that were spread in the yard. Several cases which, while confined in the walls of the Hospital, were *in extremis*, are fairly on the road to recovery since they began to camp out.



*The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.*

*We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.*

*All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.*

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SATURDAY, JUNE 20, 1874.

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## EDITORIAL.

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### THE VISION OF MALTHUS.

NOT long since, we took occasion to lay before our readers some statistics showing that the average subsistence and means of comfort for the race were increasing. This it appears is true chiefly, if not solely, in what we may call the enlightened nations,—those which are in reality or in origin European. In India, on the other hand, the vision of the much-derided seer seems to be taking the grim outlines of a reality. It appears that the population of that country is now, for the first time within the historical period, rapidly increasing. Formerly, the constant wars between the numerous native princes, the deadly arts of the Thugs, the family broils, the secret practices of the poisoners, the suttee, the car of Juggernaut, and, above all, the universal practice of infanticide, kept down the population. The English rule has, however, closed most of these outlets, and the result is daily becoming more apparent. In Bengal the traditional population was 12,000,000, but a recent estimate has



The building should be only one story high, with ventilation amply provided for at the apex of the roof; undoubtedly the pavilion-plan is the best. Such a plan has been carried out at Leipsic, as I learn by an admirable article in the *New York Evening Post* of March 23. At the gates of Leipsic there is an immense shed-hospital consisting of fourteen large "sheds," if such a name can be given to what are really handsome pavilions. They are detached, one-story, substantial frame buildings, filled in with brick, connected through an ante-chamber by a gallery, and facing a garden. They are one hundred feet by thirty-two feet in size inside, with a height of fifteen feet to the eaves and of twenty feet to the roof-ridge.

They stand sixty feet apart, are raised on stone piers four feet higher for the sake of ventilation. There are also ridge-ventilators, with movable sashes to furnish protection from cold during a part of the day in winter. Each "shed" has twenty-four beds, with nurses' room, baths, kitchen, and closets complete. There are isolated sheds for contagious diseases. No lying-in women are admitted. During twelve months, from August, 1872, to 1873, Professor Wiersch, who has direction of the surgical clinic, performed two hundred and sixty-six serious operations and did not lose a case from pyæmia, while prior to the construction of the pavilions, in the old stone hospital, which is now the central building, he lost from forty to fifty amputations from this cause annually.

The more space for free circulation of air our hospitals can secure, the nearer we can come to the Leipsic model, the better will be the economical and sanitary results.

Dr. F.

In



pulmonary artery, where the current was less forcible than in the aorta. The slight obstruction thus produced would still further embarrass the feeble right ventricle, and this circumstance would favor the closer blocking of the vessels. Hence, violent respiratory efforts would ensue, the blood not having access to the aerating organs, and death was the result of mechanical asphyxia.

Dr. PACKARD called attention to the fact that in this patient, the subject of cancer, there were evidences of the former occurrence of tuberculous deposit in the cicatrices at the top of each lung.

The viscera were referred to the Committee on Morbid Growths for further examination, who reported May 7, 1874, as follows:

“Your committee found in Dr. Packard's specimen a large-sized gall-stone impacted in the ductus choledochus, where it had caused the lining membrane to ulcerate. The portion of the tube lying in front of the foreign body was pervious, although its mucous membrane was very much swollen and congested. The gall-bladder itself was contracted, and contained a small quantity of thick, dark, grumous bile; its walls were covered with a layer of fat half an inch in thickness. The head of the pancreas was found very much indurated, and somewhat increased in size. This was found upon examination to be due to an excessive development of connective tissue between the normal secreting parenchyma.”

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MEDICAL SOCIETY OF THE COUNTY OF  
ALBANY, NEW YORK.



Dr. B. W. Richardson's Ideal Hospital,

in his City of Health

(Brighton Soc. Sec. M. J., 1875)

their success. They are small, and are readily removable. The old idea of warehousing diseases on the largest possible scale, and of making it the boast of an institution that it contains so many hundred beds, is abandoned here. The old idea of building an institution so that it shall stand for centuries, like a Norman castle, but, unlike the castle, still retain its original character as a shelter for the afflicted, is abandoned. The still more absurd idea of building hospitals for the treatment of special organs of the body, as if the different organs could walk out of the body and present themselves for treatment, is also abandoned.

It will repay us a minute of time to look at one of these model hospitals. One is the *fac simile* of the other, and is devoted to the service of every five thousand of the population. Like every building in the place, it is erected on a subway. There is a wide central entrance, to which there is no ascent, and into which a carriage, cab, or ambulance can drive direct. On each side the gateway are the houses of the resident medical officer and of the matron. Passing down the centre, which is lofty and covered in with glass, we arrive at two side-wings running right and left from the centre, and forming cross-corridors. These are the wards: twelve on one hand for male, twelve on the other for female patients. The cross-corridors are twelve feet wide and twenty feet high, and are roofed with glass. The corridor on each side is a framework of walls of glazed brick, arched overhead, and divided into six segments. In each segment is a separate, light, elegant removable ward, constructed of glass and iron, twelve feet high, fourteen feet long, and ten feet wide. The cubic capacity of each ward is 1,680 feet. Each patient who is ill enough to require constant attendance has one of these wards entirely to himself, so that the injurious influences on the sick, which are



The streets of our city, though sometimes very busy people, are comparatively silent. The subways relieve the heavy traffic, and the factories are all at short distances from the town, except those in which the work that is carried on is silent and free from nuisance. This brings me to speak of some of the public buildings which have relation to our present studies.

It has been found in our towns, generally, that men and women who are engaged in industrial callings, such as tailoring, shoe-making, dress-making, lace-work and the like, work at their own homes amongst their children. That this is a common cause of disease is well understood. I have myself seen the half-made riding-habit that was ultimately to clothe some wealthy damsel rejoicing in her morning ride, act as the coverlet of a poor tailor's child stricken with malignant scarlet-fever. These things must be, in the ordinary course of events, under our present bad ordinary system. In the model city we have in our mind's eye, these dangers are met by the simple provision of workmen's offices or workrooms. In convenient parts of the town there are blocks of buildings, designed mainly after the manner of the houses, in which each workman can have a work-room on payment of a moderate sum per week. Here he may work as many hours as he pleases, but he may not transform the room into a home. Each block is under the charge of a superintendent, and also under the observation of the sanitary authorities. The family is thus separated from the work, and the working man is secured the same advantages as the lawyer, the merchant, the banker now possesses: or, to make the parallel more correct, he has the same advantage as the man or woman who works in a factory and goes home to eat and to sleep.

In most towns throughout the kingdom the laundry system is dangerous in the extreme. For anything the healthy householder



created by mixing up, in one large room, the living and the dying; those who could sleep, were they at rest, with those who cannot sleep because they are racked with pain; those who are too nervous or sensitive to move, or cough, or speak, lest they should disturb others; and those who do whatever pleases them; these bad influences are absent.

The wards are fitted up neatly and elegantly. At one end they open into the corridor, at the other towards a verandah which leads to a garden. In bright weather those sick, who even are confined to bed, can, under the direction of the doctor, be wheeled in their beds out into the gardens without leaving the level floor. The wards are warmed by a current of air made to circulate through them by the action of a steam-engine, with which every hospital is supplied, and which performs such a number of useful purposes, that the wonder is how hospital management could go on without this assistance.

If at any time a ward becomes infectious, it is removed from its position, and replaced by a new ward. It is then taken to pieces, disinfected, and laid by ready to replace another that may require temporary ejection.

The hospital is supplied on each side with ordinary baths, hot-air baths, vapor baths, and saline baths.

A day sitting-room is attached to each wing, and every reasonable method is taken for engaging the minds of the sick in agreeable and harmless pastimes.

Two trained nurses attend to each corridor, and connected with the hospital is a school for nurses, under the direction of the medical superintendent and the matron. From this school, nurses are provided for the town; they are not merely efficient for any duty in the vocation in which they are always engaged, either within the hospital or out of it, but from the care with which they attend to their own personal cleanliness, and the plan they pursue of changing every garment on leaving an infectious case, they fail to be the bearers of any communicable disease. To an hospital four medical officers are appointed, each of whom, therefore, has six resident patients under his care. The officers are called simply medical officers; the distinction, now altogether obsolete, between physicians and surgeons, being discarded.

The hospital is brought, by an electrical wire, into communication with all the fire-stations, factories, mills, theatres, and other important public places. It has an ambulance always ready to be sent out to bring any injured persons to the institution. The ambulance drives straight into the hospital, where a bed of the same height, on silent wheels, so that it can be moved without vibration into a ward, receives the patient.

The kitchens, laundries, and laboratories are in a separate block at the back of the institution, but are connected with it by the central corridor. The kitchen and laundries are at the top of this building, the laboratories below. The disinfecting-room is close to the engine-room, and superheated steam, which the engine supplies, is used for disinfection.

The out-patient department, which is apart from the body of the



hospital, resembles that of the Queen's Hospital, Birmingham: the first out-patient department, as far as I am aware, that ever deserved to be seen by a generous public. The patients waiting for advice are seated in a large hall, warmed at all seasons to a proper heat, lighted from the top through a glass roof, and perfectly ventilated. The infectious cases are separated carefully from the rest. The consulting rooms of the medical staff are comfortably fitted, the dispensary is thoroughly officered, and the order that prevails is so effective that a sick person, who is punctual to time, has never to wait.

The medical officers attached to the hospital in our model city are allowed to hold but one appointment at the same time, and that for a limited period. Thus every medical man in the city obtains the equal advantage of hospital practice, and the value of the best medical and surgical skill is fairly equalized through the whole community.

In addition to the hospital building is a separate block, furnished with wards, constructed in the same way as the general wards, for the reception of children suffering from any of the infectious diseases. These wards are so planned that the people, generally, send sick members of their own family into them for treatment, and pay for the privilege.

Supplementary to the hospital are certain other institutions of a kindred character. To check the terrible course of infantile mortality of other large cities—the 76 in the 1,000 of mortality under five years of age—homes for little children are abundant. In these the destitute young are carefully tended by intelligent nurses; and mothers, while following their daily callings, are enabled to leave their children under efficient care.

In a city from which that grand source of wild mirth, hopeless sorrow and confirmed madness, alcohol, has been expelled, it could hardly be expected that much insanity would be found. The few who are insane are placed in houses licensed as asylums, but not different in appearance to other houses in the city. Here they live, in small communities, under proper medical supervision, with their own gardens and pastimes.

The houses of the helpless and aged are, like the asylums, the same as the houses of the rest of the town. No large building for the poor, of pretentious style, uprears itself; no men badged and badgered as paupers walk the place. Those poor who are really, from physical causes, unable to work, are maintained in a manner showing that they possess yet the dignity of human kind; that, being worth preservation, they are therefore worthy of respectful tenderness. The rest, those who can work, are employed in useful labors which pay for their board. If they cannot find work, and are deserving, they may lodge in the house and earn their subsistence; or they may live from the house and receive pay for work done. If they will not work, they, as vagrants, find a home in prison, where they are compelled to share the common lot of mankind.

Our model city is of course well furnished with baths—swimming baths, Turkish baths, playgrounds, gymnasia, libraries, board schools, fine art schools, lecture halls, and places of instructive amusement. In every board school, drill forms part of the programme. I need not



the additional subscription of \$250,000. This appropriation was unanimously voted, and when on November 15th, the subscription reached the required sum of \$250,000, application was made to the State Treasurer, and the amount appropriated (\$100,000) was paid.

Finding that as the sum of the subscriptions rapidly increased, it would be possible to erect a much larger hospital than was at first deemed possible, application was made in May, 1872, to the City Councils for a lot of ground as a building site; and by an ordinance, approved May 18th, 1872, a piece of ground (extending between Thirty-fourth and Thirty-sixth Streets, embracing nearly six acres in immediate continuation of the remaining property of the University), was given to the Trustees in trust as a building site for the proposed hospital. In return the Trustees agreed to complete the building within five years, and to permanently maintain in it at least fifty free beds for the use of the poor of the community disabled by accident or sickness. In addition to the smaller private subscriptions, the sum of fifty thousand dollars has been contributed by a generous and benevolent gentleman, payable so soon as the endowment fund shall actually amount to \$250,000.

As the plans that have been adopted for the

*over*



hospital will involve an outlay of over \$200,000 in building alone, it has been decided to apply to the Legislature for a second sum of \$100,000, contingent upon the securing of an additional \$100,000 by subscription.\* If this application meet with the success which is hoped for and confidently anticipated, it will put the Trustees in possession, on account of the hospital, of nearly six acres of ground, free from all incumbrance; a building fund, given by the State, of \$200,000; and an endowment fund raised by contribution of \$350,000.

During the past summer a Building Committee, with the aid of the University architect, elaborated the plans for the hospital with the greatest care. The proposed building will harmonize in architecture with the already completed Department of arts and science, and like it will be in the University Gothic style. Its plan is specially designed to admit of the continued growth and extension of the hospital without injury to its unity or to its architectural symmetry. It comprises a central building and a series of lateral pavilions, each designed to accommodate ninety patients. The central building consists of a basement floor, three stories, and a Mansard roof.

\* This sum has been appropriated by the Legislature.



It is sixty feet front by one hundred and fifty deep. It contains a lecture room on the basement floor for two hundred persons, and a great amphitheatre in the upper portion, capable of seating seven hundred. It contains, also, the general kitchen, offices of administration, sleeping rooms for Resident Physicians, apartments for private patients, etc.

It is proposed to erect at present but two pavilions, which are to be connected with the central building by corridors about forty feet long. The entire structure will be about two hundred and twenty feet long, and will front on the south side of Spruce Street but a short distance back from the curb, so as to allow as much space as possible in the rear for exercise and ventilation. Each pavilion will consist of a basement floor (devoted to dispensary work, servants' rooms, cells for mania à potu patients, etc.), two main floors, and a Mansard roof, with rooms for servants. The laundry and heating apparatus will occupy a building immediately in the rear of the centre building; and the entrance for patients, waiting room, morgue, and pathological laboratory another small building on Pine Street.

The foundations of the central building and west pavilion are already far advanced.

It is generally known that the Board of Trus-



tees of the University determined to sell the ground where we now stand in order to obtain funds for the erection of the new buildings in West Philadelphia, and also that a Commission appointed by the Government of the United States has reported in favor of its purchase as a site for the public buildings required in this city. The Congress has made an appropriation for this object, and now it only remains for the Secretary of the Treasury to approve of the report of the Commission, which was presented several months ago. There is every reason to believe that this approval will not be withheld.\* As soon thereafter as possible, a building for the Medical Department will be erected in the immediate vicinity of the University Hospital. These two buildings will harmonize in architecture with that of the Department of Arts, whose beauty is well known, and when they are completed, and the grounds around them appropriately inclosed and adorned, they will be among the finest public edifices of Philadelphia.

The Medical Department, possessed of a model hospital entirely under its own control, will also be at the very doors of the Philadelphia Hospital, one of the largest in the United States; and

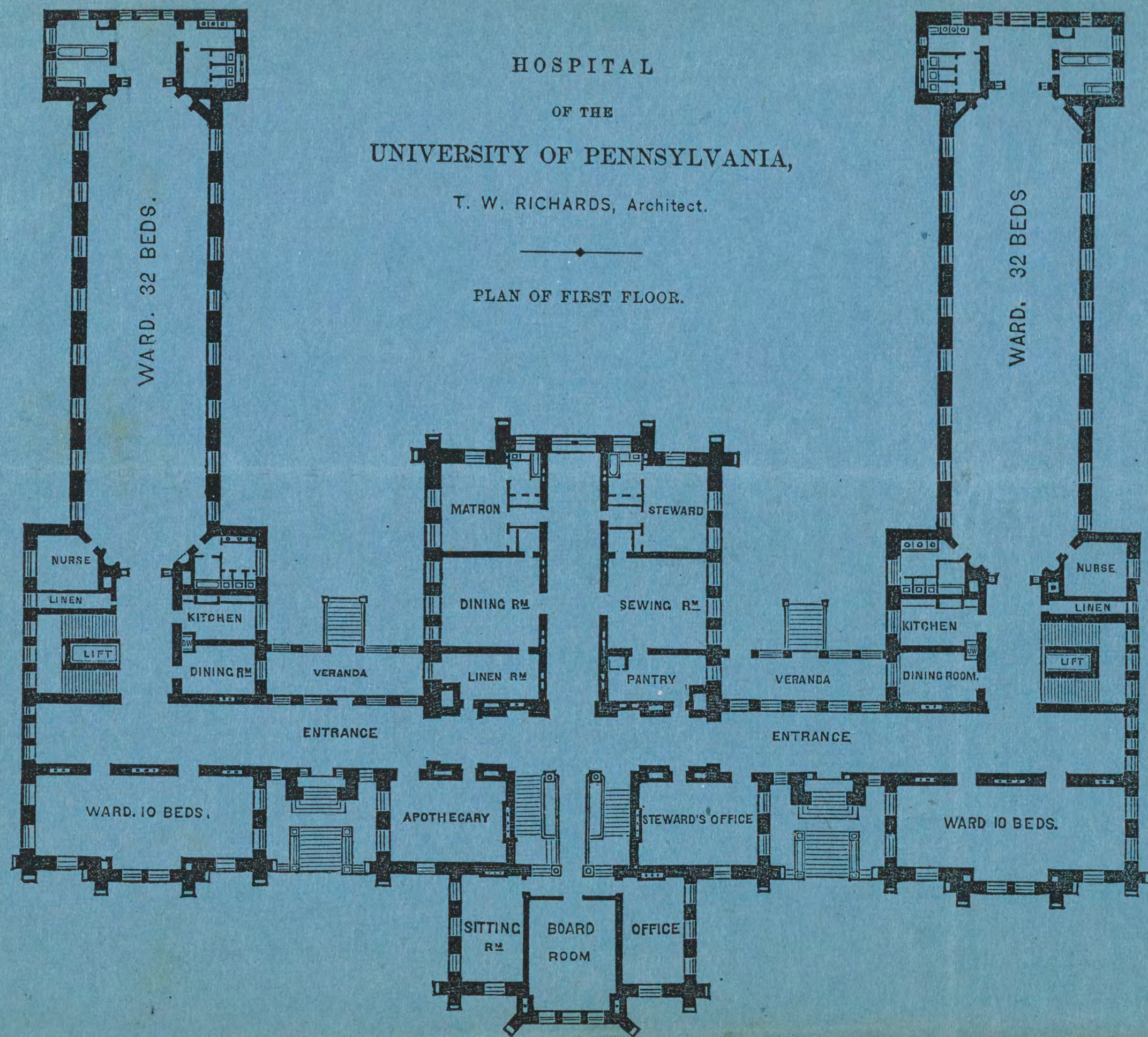
\* Since the delivery of this Address the Report has been approved.



HOSPITAL  
OF THE  
UNIVERSITY OF PENNSYLVANIA,

T. W. RICHARDS, Architect.

PLAN OF FIRST FLOOR.





Don't stop



—

*The Cost of Hospital Buildings.*—The cost of the site for the new St. Thomas's Hospital, London, we learn from the *Lancet*, July 26, 1873, is £148,545. The total cost of the building is £383,948; that of the furniture upwards of £10,000; the total outlay being upwards of £552,000. The cost per bed is a little more than £530, with a cubic capacity of 1800 feet for each patient.

The Herbert Hospital—one of the best constructed pavilion hospitals in Europe—with a cubic capacity of 1200 feet per head, cost £320 per bed. The Lariboisière Hospital, at Paris, with a cubic capacity of nearly 1900 feet per patient, is said to have cost £440 per bed; and the expense of the Hôtel-Dieu, at Paris, now in course of erection, with a cubic capacity of 2300 feet per head, is reported to be £750 per bed if intended for 800, or as much as £1500 per bed if the number of these be reduced, as proposed, by half. Taking, therefore, the average cost of these great hospitals, the average cost per bed will be a little over £500, and the average cubic capacity 1800 feet.



This work has long been the acknowledged  
its present improved shape it is hoped that  
valuable assistance in the treatment of a fre  
disorders.

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STURGES' CLINIC  
AN INTRODUCTION  
TO THE STUDY OF CLINICAL MEDICINE  
BEING A GUIDE TO THE INVESTIGATION OF DISEASE  
FOR THE USE OF STUDENTS  
BY OCTAVIUS STURGES

Assistant Physician to the Westminster Hospital

*In one neat volume, royal 12mo*

We hope that the generation of medical students who are now entering upon hospital practice will have the sense to buy this capital book, and to thoroughly imbue themselves with its spirit. The book is full of plain practical hints; it does not talk of things in general, but of things which are constantly coming under the student's notice and puzzling him to know what to do with them. The language is clear and concise, and the size and shape of the little volume are convenient.—*Lond. Practitioner*, June, 1873.

Is likely to be extremely useful to all students, who, in taking cases, must necessarily follow a similar, if not exactly the same, mode. Nor is it only to the student that this book is likely to be of use; many practitioners will find their diagnosis all the more clear, and their ideas of the nature of their patient's illness probably much

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SHORT  
FENWICK'S



WE learn from a recent exchange that the English government is offering iron hospitals to various unions throughout Ireland for the sums of £220 to £250 and £280, according as they are to contain twelve or twenty patients. They can be set up and made ready for occupation in a month, and are said to be with water-closets, nurse-rooms, wash-rooms, etc., complete. If they be what they seem, these iron hospitals appear to solve the question of hospital construction, costing, we should suppose, furnished, not more than one hundred dollars a bed.

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The late Prof. Miller was not only a great writer and teacher, but a most accomplished practitioner, a Christian gentleman, and a warm-hearted philanthropist, never wearying in his efforts to suppress vice and immorality, and to improve the condition of the humbler classes of people in his own and in foreign countries.

Subscriptions may be remitted directly to Edinburgh, to the address of Dr. A. G. Miller, or to Dr. Barton, to my care, Eleventh and Walnut Streets. Medical journals, friendly to the object, will please copy.

I have the honor to be, very respectfully, your friend and obedient servant,

S. D. GROSS.

PHILADELPHIA, October 15, 1873.

“‘MILLER MEMORIAL HOME.’—Shortly after the death



Dr Prosper De Pieta Santa (Union Médicale)  
was as latest (October 1866) accepted prin-  
ciple of Hospital construction in France.

1. "Orientation" east ~~west~~ west; i.e. <sup>8?</sup> ~~1~~ <sup>11.85</sup>

2. Over 600 beds, too large for good ad-  
ministration.

3. wards should hold 30 to 35 beds re-  
serving "salles d. alternance".

4. Separate pavilions being multiplied, on  
each story there must be one room of 2 to 4  
beds. (?)

5. Small-pox & other contagious must be isolated; &  
subjects of great operations should be put in small special  
wards.

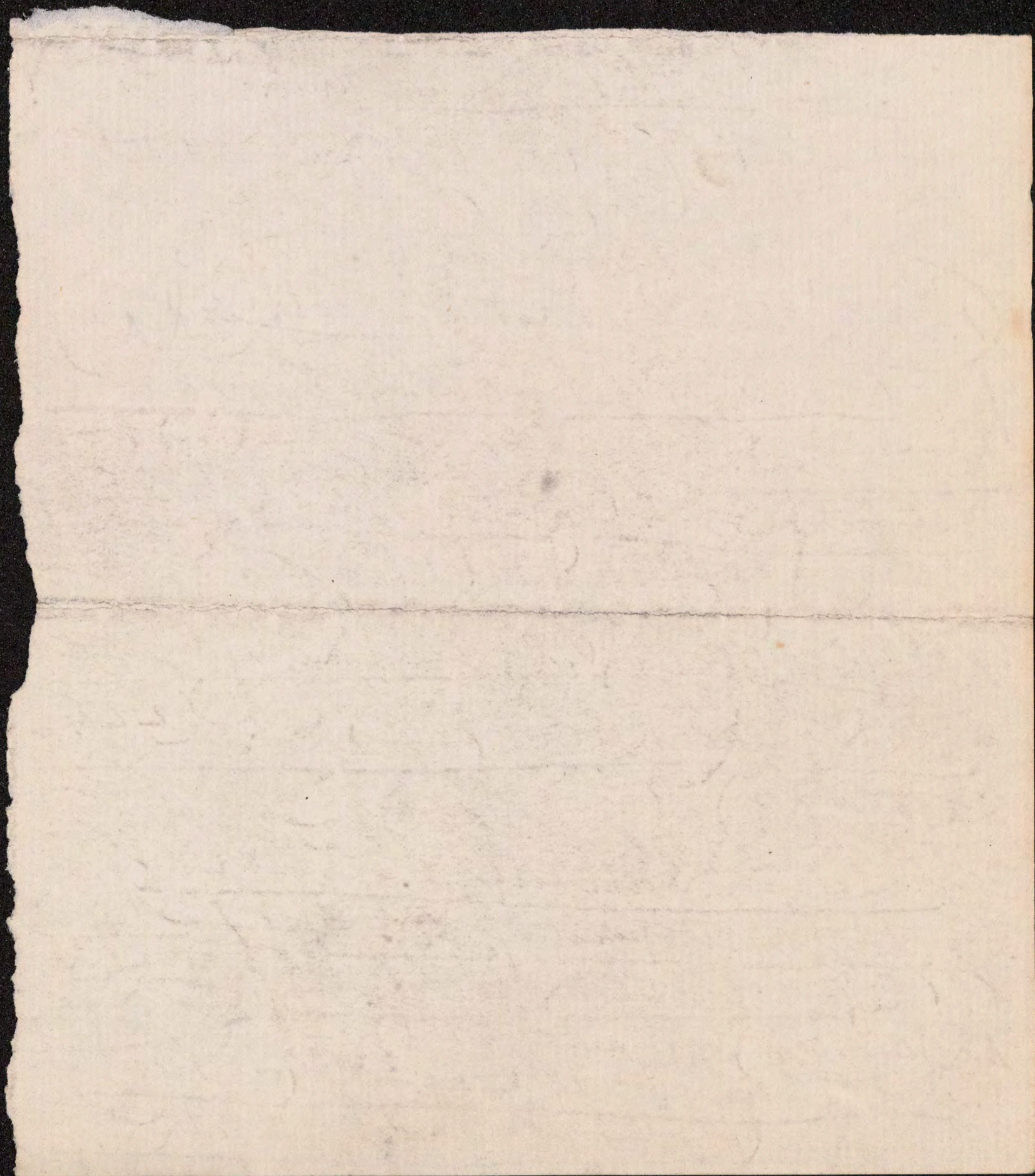
6. 1 metre 850 centimetres between beds.

7. 50 cub. metres air per bed.

8. Obstetric services entirely separate organization.

9. Convalescent wards are useful & important.







Drainage —

no drain to pass under the building.

Police —

prompt removal of all rubbish & soap-  
enough (not too much) washing —

Convalescent ward

Airing corridors &

grounds —

all important.

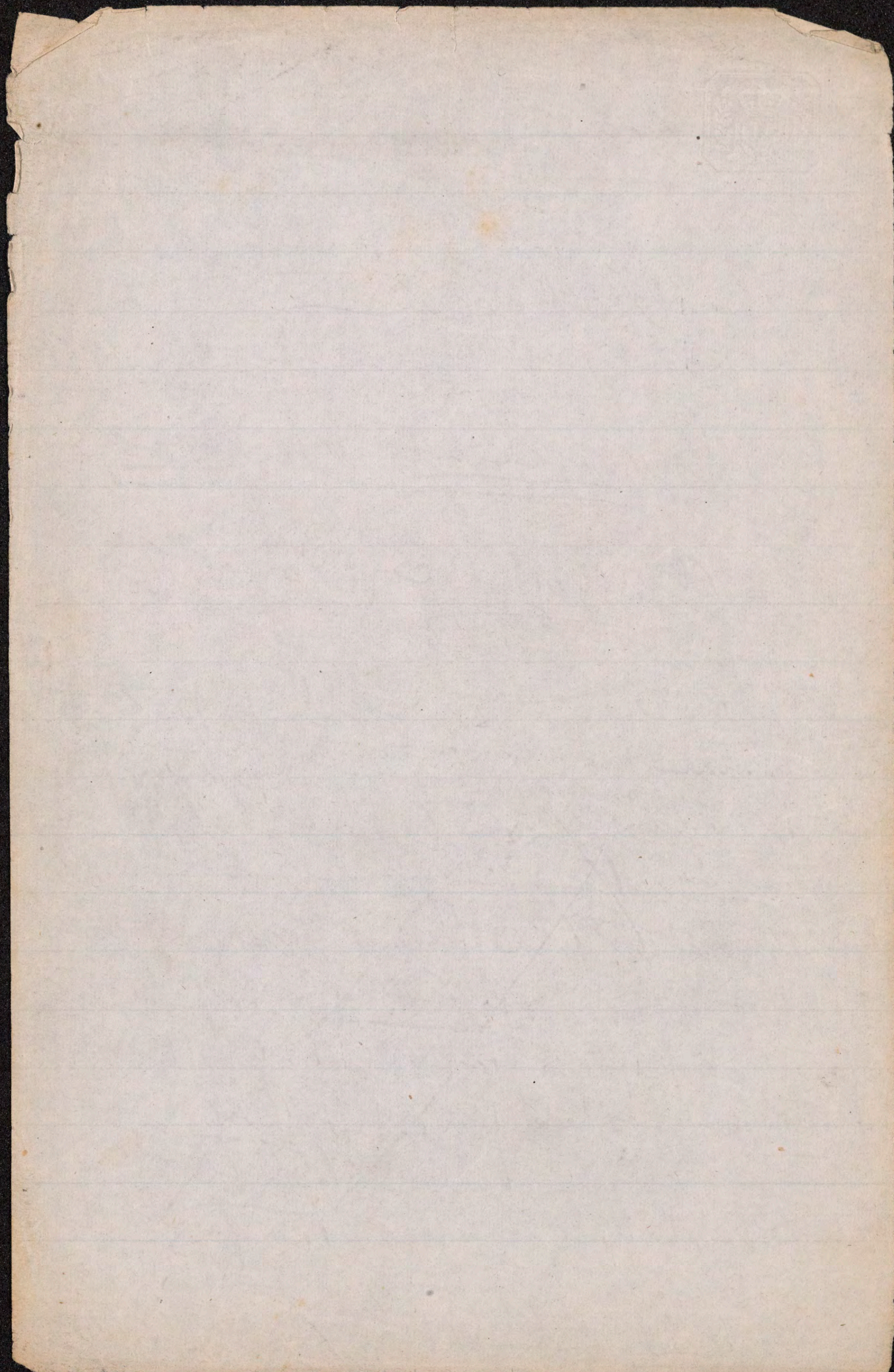
Corridors need perfection — a case told of in Gallon's book where  
fetid pus was smelled along one from a window 39 ft off!

Hospitalism : See Simple

~~Mortality after Operations — as amputations,  
in proportion to size of seasons — Hospital.  
In great Hosp. of Paris, propor. 1 death with amputa.  
British, over 300 beds, 1 in  $2\frac{1}{2}$ . Dist of London,  
between 300 & 150 beds, 1 in 4; 150 to 25 beds,  
1 to  $5\frac{1}{2}$ ; Cottage hospitals, 1 in 7. Still  
better in private country practice.~~

Callender's results per contra! See End →







Thus it will be seen that there has been in these wards during four and a half years a death-rate after all operations (excluding hernia) of but three per cent., and that of the thirty-three cases of amputation, including fourteen of the thigh and fourteen of the leg, all have recovered. The twenty-eight cases of compound fracture have likewise all recovered; and this explains the absence of cases of primary amputation in the list. It may be doubted whether the results of any surgeon in private practice ever exceeded this; and hence some lectures which Mr. Callender is now publishing in the journal of the Association (*British Medical Journal*), explaining all the details of his treatment, are attracting great attention. They, however, contain little that is new in principle,—indeed, they do not profess to do so,—but they are highly interesting, as showing how important is the attention to small things, and how greatly results are influenced by the most conscientious devotion to details. Rest, isolation, scrupulous cleanliness, antiseptic applications (without the exclusion of air), and a minute and intelligent supervision of everything which can avoid septic poisoning of the wound and improve the patient's condition,—these are the secrets of Mr. Callender's success. I should say that Mr. Callender is a man remarkable for scrupulous exactness in word and act; he is as conscientious in what he says as in what he does; and, besides the fact that all his cases are controlled by public record in the books and papers of the hospital, there is no one here who hesitates to accord the most implicit reliance to his statements, as being sure to be entirely free from every conscious exaggeration, and certainly from every kind of statistical



juggle. The whole question of hospital mortality is likely, therefore, now to be transferred from the region of paper statistics, in which it has rested for a long time, to its proper field, that of actual clinical experiment in the wards of great hospitals. I shall have again to return to this subject (which I do not doubt that you will agree with me in thinking of deep interest); for Professor Erichsen and Dr. Lauchlan Aitken (who assisted the late Sir James Y. Simpson in preparing his statistics) are likely to take the field again shortly on his side of the question, while the series of lectures which Mr. Callender has now commenced will give a minute review of his methods and results, and of those of his colleague at the hospital, Mr. Marrant Baker, which have been hardly less interesting and successful.

The Societies have recommenced, but as yet without any promise of papers of more than ordinary interest. The next meeting of the Clinical Society will, however, produce two interesting papers by Sir William Gull, which may be worth discussion. The most ordinary topics of interest are the preparations for the Ashantee expedition, which is to be a doctors' and an engineers' war chiefly. A few years ago "a doctors' war" would have been a phrase not easily understood by the million. Now, however, it is beginning to be pretty well understood that in a tropical campaign "the wise physician skilled our wounds to heal" (and to prevent) is sometimes "more than armies to the public weal."

A very general and most unusually earnest and outspoken feeling of grief has been caused by the almost sudden death of Dr. John Murray, who, though under thirty years of age, was well known as sub-editor of a medical paper, and was already physician to two leading hospitals. He was carried off suddenly by an attack of erysipelatous inflammation of the fauces, followed by rapid œdema of the larynx. His remains were removed to Aberdeen, his place of birth: they were met at the railway-station by upwards of four hundred of the best-known London practitioners, and a funeral service was there conducted of singular solemnity and strangely sad impressiveness. A tablet and bust will be erected to his memory. Some excellent Latin and Greek lines have been published *in memoriam*. As classical tributes of the kind to the memory of physicians are becoming unfortunately rare, and as both are from the pens of London medical men, I will quote the Greek, which is much admired for its point and classic neatness of diction:

Τί τοῦτο, Θάνατε; Μῶν ὑφαρπάσαι δοκεῖς  
Ἰατρὸν ὧδ' ἀνηβον, ὡς τέχνης φθονῶν;  
Οὐκ ἔστι· καὶ γὰρ ἐγγεγραμμένος φρεσὶν  
Φίλων, πενήτων, πάντος ἱατρῶν γένους,  
Ἄπων παρέστι, καὶ σὲ νικήσει θανῶν.

"And didst thou think, O death, to gain  
A victory by having slain  
Him so young, so full of skill?  
Ah, no! for he is living still.  
He lives enshrined in many a heart,  
Friends, brothers, debtors to his art.  
Thus, though absent, present, he  
In dying, death, shall conquer thee."

From a physician much honored I must pass to one who has incurred professional censure. A well-known physician of St. Thomas's Hospital, greatly to the surprise of his professional brethren, lately undertook to edit a column, entitled "Our Medical Column," in a weekly paper called "The English Mechanic." This is entirely contrary to obvious rules of professional ethics. He defended himself vigorously and defiantly when called to account by the medical papers, and alleged—no doubt truly—purely philanthropical motives. But, whatever the motive, the course was obviously wrong; and, after a very brief struggle, he has succumbed, not without some loss of consideration among his professional brethren here, who do not easily pardon such a breach of professional rule. The struggle was so brief that the College of Physicians and the staff of his hospital have been relieved from the necessity of interfering.

The death is announced to-day of Sir Henry Holland, a physician who has occupied the highest social position for many years, and who was of great literary and scientific distinction, but who was not very well known personally in medical circles, from which he held himself unduly aloof. He died at the age of eighty-five, quietly in his bed, after a very few hours of languor, having recently returned from one of those long vacation-rambles far afield (this time to the fair at Nijni Novgorod in Russia) in which he had annually indulged throughout his long and active life. He was a frequent visitor to America, and the friend of many distinguished American citizens,—among others, the personal friend of six Presidents of the United States. His first wife was a daughter of the late Canon Sydney Smith.

PHILADELPHIA, Nov. 20, 1873.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR:—I send the following clipping from the *Public Ledger*. What chance have the hospital doctors against an accoucheur with a baby of seventeen and three-quarters pounds weight?

"A BOUNCING BOY BABY.—Mr. John Brooks, 1728 Warnock Street, has been furnished by the attending physician, Dr. Prall, with the following particulars concerning his new-born son, Henry C. Brooks, born on Tuesday last, November 18:

Weight . . . . .	17 $\frac{3}{4}$ pounds.
Length . . . . .	22 $\frac{1}{2}$ inches.
Measure around the shoulders . . . . .	19 $\frac{1}{2}$ "
Measure around the waist . . . . .	17 $\frac{1}{2}$ "
Measure around the chest . . . . .	17 $\frac{1}{4}$ "
Measure around the head . . . . .	16 "

"Perhaps some of our experienced doctors, or affectionate mothers, may be able to present cases approaching the dimensions of this young gentleman on his birthday: if so, the *Ledger* will help to make an enduring record of the fact."

Yours,

CONTRIBUTOR.



John Simon, Med. Officer of Privy  
Council of Gr. Britain, says:  
"That which makes the healthiest house makes  
likewise the healthiest hospital; the same fastid-  
ious & universal cleanliness, the same never ceasing  
vigilance against the thousand forms in which  
dirt may disguise itself, in air, & soil, water,  
in walls, & floors, & ceilings, in dress & bedding,  
furniture, in pots & pans & pails, in sinks  
& drains & dust-bins."

As Dr. Caspar Worré adds in quoting this, all  
the danger of hospitalism does not belong to old buildings  
new ones mismanaged soon become foul



The corner-stone of a new College Building will be laid at the corner of North College Avenue and Twenty-First Street, Thursday, October 1st, 4 P. M., at the conclusion of Prof. Isaac Comly's General Introductory to the Twenty-Fifth Course of Lectures.

You are cordially invited to be present.

Edward Lewis,

Chairman of Building Committee.

Sep. 25th, 1874.



# Mortality of Paris Hospitals -

1855-56  
Per cent.

Hosp. in Brephons, 1856, 20 per cent.	Lariboisiere (11.7)	1 in 5.83 patients
" " " 14 "	Pitie (11.91)	6.97 - 9.37 (1868)
" " " "	Beaujon (11.73)	" 7.10 - 8.92
" " " "	Cochin (9.85)	" 7.16 - 11.90
" " " "	Charite (9.50)	" 7.90 - 8.63 (1868)
" " " "	Hotel Dieu (10.54)	" 8.14 - 7.82
" " " "	Necker (11.02)	" 8.29 - 8.62
" " " "	St Antoine (10.39)	" 8.41 - 11.62

Vienna General Hospital, 12.6

Mortality less in London Hospitals with open fireplace ventilation but still over 9 per cent.   
 (8.59 per cent. 1868)

Episcopal Hospital, Philade., 1873, 7.12 per cent.

(Density of population proportionate to the abundance of production of the cereal grains: (Bouchardat) So, inversely is mortality & disease.   
 (as well as Baccard)



— ( 4 ) —



their scientific title, unless ten members demand a ballot.

“5. The sessions of the Society shall take place every fourth year, and be limited to ten days.

\* \* \* \* \*

“XI. The Society gives no diploma. Before the opening of each session a card available for admission to all the meetings, and signed by the President and Secretary, shall be given to each member on payment



APRIL 1876.  
A NEW CONVALESCENT HOSPITAL.—The elegant hotel at West Point, known as Cozzens', was recently purchased on foreclosure by a lady of this city, who presented it to the Society of the N. Y. Hospital to be used as a home for convalescents. The governors of the hospital are taking immediate steps to adapt the building to its new purposes. Convalescents from the St. Luke's Hospital are also entitled to its privileges.



Suggested by Johns Hopkins "Hospital Plans".

(1)

## Points about Hospitals.

Part of each 3<sup>d</sup> story a day-room for walking cases.

Corner-pieces in wards to avoid dust.

collections.

No Cornices or projections  
anywhere.

Floors of hard wood, tongued & grooved  
boards - very smooth. Boiled linseed oil,

or wax turpentine: no slopping ever,  
no wooden floor in basement; stone or asphalt.

Central aspirating shaft; also  
fireplaces, & warm air from steam-water-  
heated coils below. No such coils in  
any ward. Ventilation from under each  
bed, flues going beneath floor to the  
Central aspirating shaft.

Isolating wards for special (foul) cases.

One ward of twelve (more or <sup>in</sup> less) <sup>two</sup>  
always empty; & one bed in each ward.

Tents also on hand, or barrack-materials.  
A Hospital for 80 patients should be in centre of an acre of  
ground.



A sun-room (glazed porch  
or piazza) <sup>2</sup>

& a disinfecting (heats) chamber.

Porcelain or  
Glass slabs under & behind  
every urinal.

Double doors for waterclosets -  
with self acting water apparatus - &

special downward ventilation arrangements,  
Kitchen, on first floor (apart) or basement (not  
upper story).

S. Smith proposes only basement

Corridors - open (~~rail~~) roofs over them,

available in suitable weather for convales-

cents. <sup>in large hospital,</sup> Better, some basement, others on

1<sup>st</sup> floor, Verandas, South side especially

very good.

Bedsteads, iron; mattresses,

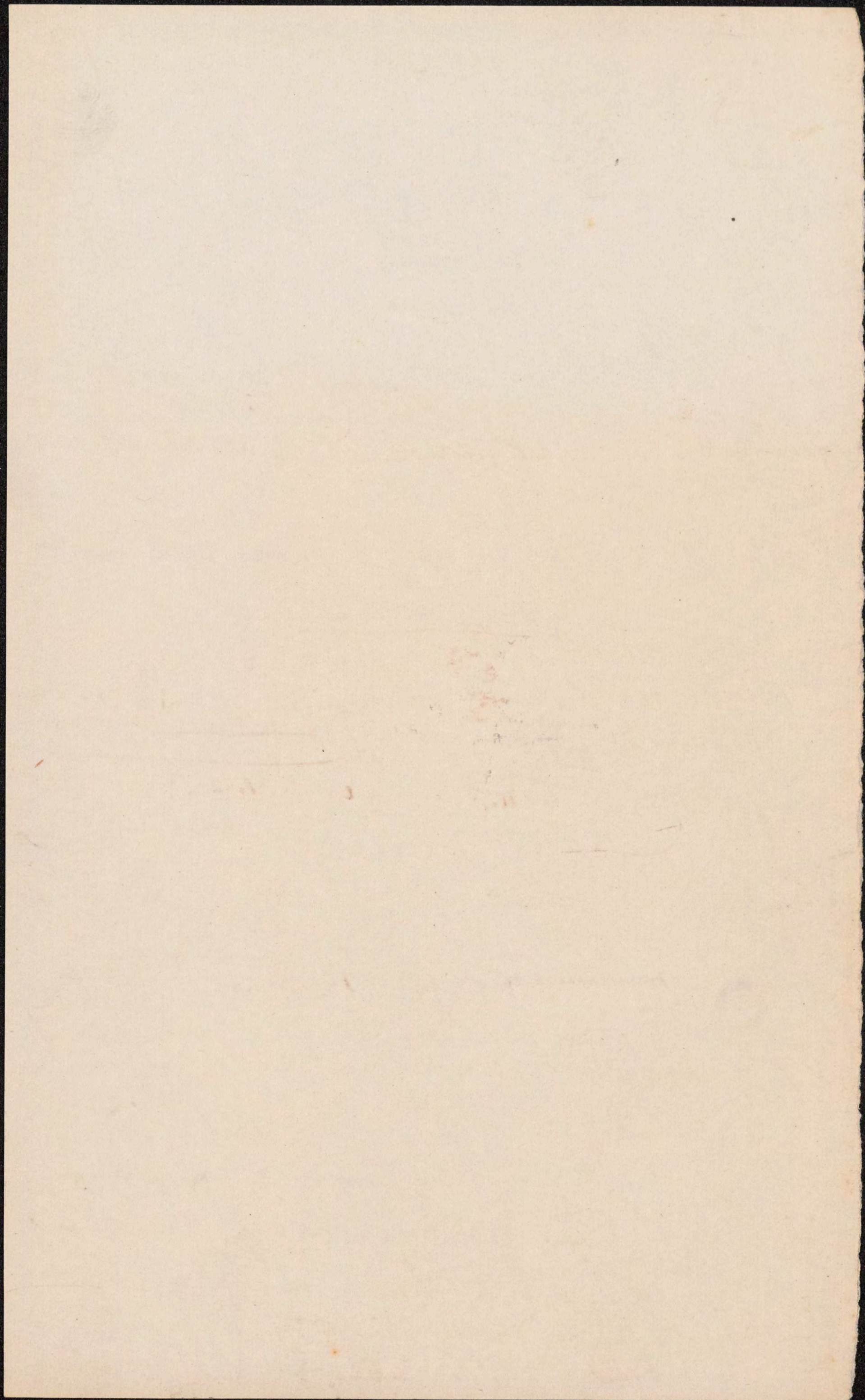
(straw?) curled hair - often sunned & aired.  
To every bed an arm-chair, for rest sitting up.



## Main Requirements For A Hospital.

1. The best (most rural, high and dry) site possible.
2. Position, running North and South;  
wards with windows <sup>at least</sup> on ~~two~~ sides. Let no ward have a width greater than twice its height to the ceiling.
3. If a large hospital, in separate buildings or pavilions; not nearer to each other than twice the height of either.
4. No ward-pavilion more than 2 storeys;  
with <sup>high</sup> deep basement ~~(or arches underneath)~~ & an attic over 2<sup>nd</sup> storey.  
(Preferably, no patients in more than 1 storey.)
5. Each main ward, not larger than 80 by 25 feet, to contain 20 patients; ceilings 20 ft. minimum air-space, 1500 c. ft. per patient. Also a few smaller, more private wards, for special cases, and for convalescents.
6. One window between each 2 beds, on each side of the ward; windows reaching to ceiling, & with sloping transoms to open above.
7. No surgical and puerperal hospitals to be combined in the same place, or under the same administration.
8. Hospitalism to be avoided by ventilation <sup>and</sup> scrupulous cleanliness.







was held back by the assistant before you introduced the tube. This was done after the isthmus was divided, hoping to relieve the pressure on the trachea. The cast you sent me shows the trachea encircled by the gland, and its internal diameter no larger than you state.

"I am very respectfully,

"Your obedient servant,

"B. S. HOVEY."

## A PORTABLE BOOK-RACK FOR THE USE OF MYOPIC CHILDREN AND ADULTS.

BY WILLIAM SHAW BOWEN, M.D.,

OPHTHALMIC AND AURAL SURGEON TO THE HARTFORD HOSPITAL.

A FEW years since, when Dr. Cohn, of Breslau, in Silesia, published the results of examining the eyes of 10,060 school children\* in the lower, middle, and upper schools of that city, his statistics attracted great attention, and students of ophthalmic science have become impressed with the extreme importance of the subject and the results thus shown. Dr. Cohn was induced to undertake this task from ascertaining, when revising the statistics of Prof. Förster's clinic, that 750 short-sighted people had presented themselves within four years, and that of these 750 over 400 had applied on account of severe annoyance dependent upon the refractive defect. The result of Dr. Cohn's investigations discloses the fact that out of the 10,060 children examined 1,004 were myopic. The tendency to short-sightedness increased as the scholars advanced from the elementary schools upwards. In the middle schools the proportion was one-tenth, and in the examination of the educational centre of the city, the University of Breslau, two-thirds of the students were myopic.

These investigations have since been pursued by other competent authorities in Germany; and Drs. Webster and Cheatham, of New York, Thompson, of Philadelphia, and E. Williams, of Cincinnati, have published valuable information as to the refraction of the eyes of school children in this country. While the proportion is not so large as in Germany, it is still sufficient to cause the question to be asked, What can be done to prevent the development and increase of this scourge, as it were, that is overshadowing our children and subjecting them to constant annoyance and oftentimes danger to future vision. Of course this subject is plain to the ophthalmic specialist; the general hygiene of myopia has been for a long time reduced to exact and simple principles, and by him communicated with emphasis to all myopes who come under his professional care; but the attention of physicians in general practice has not been adequately directed to the extreme importance of the matter; for they are the ones who are called upon in the great majority of cases for advice as to the proper regimen for the short-sighted child, who perhaps complains of pain and smarting of the eyes after a hard day's work over school-books, and by them the hygienic rules to be followed should be disseminated as widely as they disseminate the laws of health pertaining to proper ventilation, sewerage, and the care of the body. The demand for a higher and more rapid educational system are heard on all sides; it is typical of the race for life. The average American follows, and the so-called best and perfect schools are those in which the youth is forced to the utmost of his powers, the eyes sharing in the overwork as well as the mental faculties. The statistics of reliable observers show the results of this "forcing system," and nothing

can be more conclusive than the results of Cohn's researches in Breslau. The writer has not systematically examined the refraction of all school children's eyes in this city, but in one room in an intermediate school nine out of forty-one were myopes.

The general hygienic rules to be followed by short-sighted children, and those having an hereditary tendency thereto, are simple,—such as parents can be made to comprehend. Proper illumination, natural or artificial, a moderate use of the eyes if myopia exists, and avoidance of the stooping or recumbent position while engaged in study or when using the eyes for near objects requiring convergence of the optic axis, together with suitable glasses, comprise the chief of these laws, and simple as they are it is astonishing how thoroughly they are neglected. Our school furniture, usually a subject of pride, on account of architectural neatness and elegance, is usually sadly deficient as regards the height of desks, the angle at which they incline, and the distance between them and the seats. Dr. Cohn examined the school furniture at the Paris Exposition, and found the American desks as deficient in these respects as those of European make, as he has shown in an article, "The School-houses at the Paris Exposition, from a Hygienic Point of View." The child is compelled to stoop and to bring his face close to the desk, in order to see the letters, the type of school-books being generally small and defective as regards clearness, and this stooping position and the straining of the internal recti muscles in efforts of convergence causes congestion, which may cause the refractive error, if an hereditary tendency thereto exists, or increase it if it already exists in an extremely moderate degree. Stooping and excessive convergence cause congestion of the tunics of the globe; congestion by mechanical pressure tends to increase the bulging at the posterior pole, thus increasing the myopia. Aside from the use of improper glasses, these two last are the most important factors in causing progressive myopia, and consequently to keep the head erect, to bring the book to the face and not the face to the book, should be the desideratum of all myopes.

This, however, experience teaches, is exceedingly difficult to do. The child will not hold up the book; he becomes tired, and finds it is easier to lean over the desk where the book finds support. It is with difficulty that the adult myope of average intelligence can be induced to systematize the position of book or paper, although he may be the subject of progressive posterior polar atrophy, and its consequent fatal results to vision fully made known to him.

In considering this subject the writer has frequently imagined a school desk, which, by its strict regard for the hygiene of the eyes in the way of construction and in its relation to the seat, might avert in a certain degree some of the evils above mentioned. After careful inquiries of builders of school furniture, and of school committee-men, it was ascertained that any radical change of form, unless of such a nature that all could be uniform, would increase the cost of the article so as to prevent a ready sale. Economy of first cost enters largely into the consideration of the average school committee-man in fitting out his school room, and as a desk built on strictly hygienic principles would be an innovation of a marked character, it was impossible to find a manufacturer who could be induced to consider the importance of the subject sufficiently to build desks that would correct existing evils. A portable rack that can be adapted to any of the present style of desks has been made by a firm in this city,\* that goes

\* "Untersuchung. der Augen von 10,060 Schülkindern," Leipzig.

\* O. D. Case & Co., School Furniture Manufacturers.

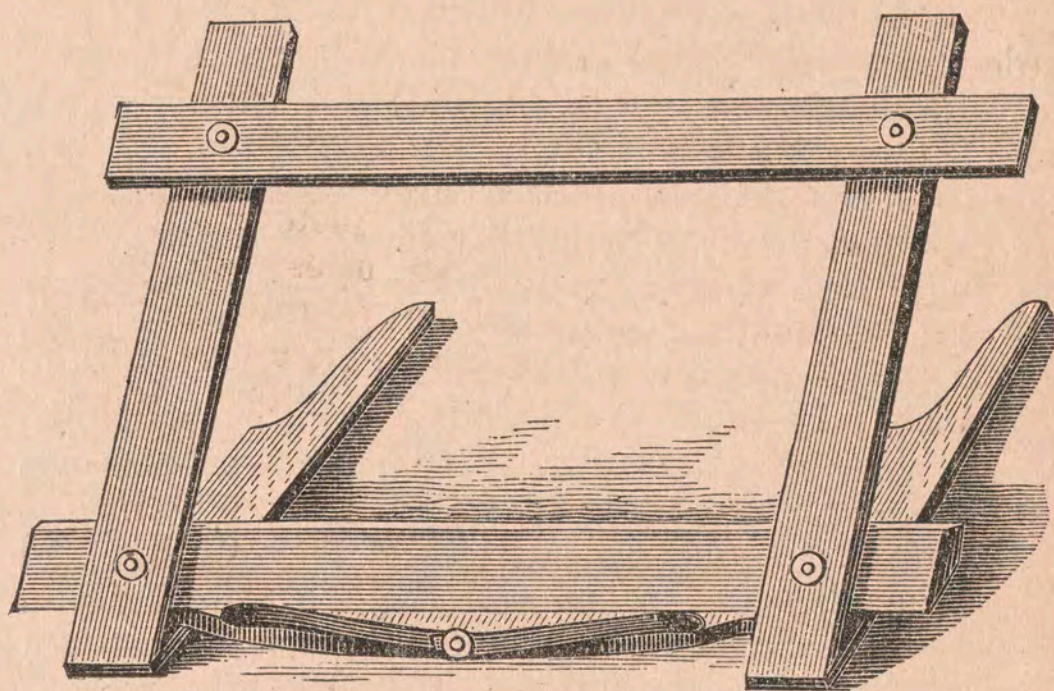
*Chauncy Hall (Boston)*

*School Desk - adjustable.*

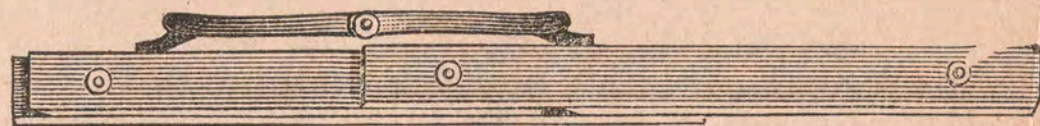
*Book rack for Myopes*



a long way towards aiding the accomplishment of one of the hygienic rules, viz., to enable the scholar to read easily and without fatigue, with the head erect, and to avoid the stooping position. The diagram shows the rack in position, and partially folded to



be packed away in the desk when not in use. It can be made at a very small cost, is provided with metal springs to keep the book in position, may be made at



any angle from the horizontal plane of the desk top, and is provided with rubber bands on its support to prevent noise in its motions when in use. They are useful for myopic adults as well as children, and can be used on the office desk and in the library, and when not in use can be folded and laid aside. It involves no new principles in its construction; it is the practical adaptation of old and well-established ones; is simple and not liable to get out of repair, and can be made at very small expense, so as to be within the reach of all.

HARTFORD, CONN., Nov. 1, 1875.

## Reports of Hospitals.

### BELLEVUE HOSPITAL.

#### NOTES OF PRACTICE AND PECULIARITIES OF TREATMENT.

##### CHRONIC BRIGHT'S DISEASE.

THE following is a summary of a plan of treatment recommended:

##### DIET.

This class of patients should abstain as much as possible from meat. The opinion was expressed that the excessive animal diet accounts for the great prevalence of the disease in this country. Milk should be substituted for meat, and should be associated with lime. Butter may be used; eggs if they agree, and fresh fish in the morning. Fried fats should be carefully excluded, but cream may be taken without stint. Vegetables and fruits are *always* good, but those should be selected which contain the least amount of woody fibre. Rice and potatoes, therefore, may be used, but asparagus, turnips, cabbage, and notably beans, which contain woody fibre in large quantities, should be assiduously avoided. Onions may be eaten with impunity, and are rather beneficial.

##### FOR THE ANÆMIA.

Iron should be administered from first to last, and by preference, the tincture of the chloride. This preparation is assimilated with difficulty, hence should not be given alone, but combined with nux vomica, and to this spirits of nitre may be added to assist the determination towards the kidneys. For example, ten drops of the tincture of the chloride of iron, ten drops of tinct. nux vomica, and one drachm of sweet spirits of nitre may be given three times a day.

Cod-liver oil increases the red corpuscles of the blood, because it is digested by the liver, and the product enters into them as an ingredient. The irritability of the stomach may make it troublesome to take, but it should be relied upon as much as in the treatment of phthisis.

##### TO COMBAT THE DISEASE ITSELF.

We have one agent which may be regarded as a specific against increase of connective tissue in the body, wherever the interstitial inflammation may occur, and that is the bichloride of mercury. It should be given in small doses, one-twentieth of a grain is the usual size, and should be combined with a diuretic to make it act upon the kidney. For example, one-twentieth of a grain of the bichloride, one grain of digitalis, and one grain of quinine may be given three times a day, with the result of producing a specific action upon the kidneys, and will *raise* the specific gravity of the urine.

##### ATTENTION TO THE CONDITION OF THE SKIN

will materially assist the embarrassed kidneys, and to do this we may have recourse to two things. If excessive œdema is present, the pressure produced shuts off the circulation to a great extent and prevents removal of the fluid by diaphoresis. It is much better then to make punctures in the distended skin of the legs, and let the water drain away at once. No apprehension need be had with reference to this trifling operation, if the limb, when the punctures have been made, is wrapped with cloths wet in a solution of carbolic acid in water, to which has been added essence or oil of cinnamon. The latter is to correct the smell of the carbolic, and is also equally antiseptic.

The second thing is, to rub the patient all over once a day with sweet oil. If extra diaphoresis is desirable, it can be best obtained by placing a blanket in an empty bucket, pouring hot water upon it, for in this way much less water is required, and then wringing it out and quickly applying it around the body and covering it with a dry blanket. The skin should be well oiled before the blanket is applied.

Such was a brief outline of the general treatment for this class of cases, and may be suggestive in certain particulars.

##### PROGRESSIVE MUSCULAR ATROPHY.

The interest in this case was the *limitation* of the atrophy, for it affected chiefly, almost exclusively, the extensor muscles of the thigh. There had been simply a gradually increasing weakness of these muscles going on during the past thirteen months without loss of sensibility or pain. The thigh affected, the right one, measured 17½ in. in circumference, while the unaffected thigh measured 19½ in. Below the knee the muscles seemed very good. There was no evidence that the man had ever suffered from disease of the spinal cord, unless the present condition is regarded as due to some degeneration of the anterior horns, but there was no evidence of pre-existing meningitis, myelitis, etc., nor had there been any tremor or peculiar pain. There



The curvature of the spine occasioned was mostly to the right, caused no doubt, largely by writing at unsuitable desks. The excess among girls is due, no doubt, very much to the fact that they take less active exercise and are much less robust, as a rule. Herr Raag, of Berlin, says that he has found gymnastics very useful in preventing these spinal curvatures. With practical benefits resulting from these exercises, the lectures on hygiene, etc., will have much greater force than otherwise.

For proper school gymnastics it is only requisite that there should be space enough about the desks to enable the pupil to advance one step and to swing the arms freely. A large hall with a few desirable pieces of apparatus, is all that is needed for further gymnastic exercise which is to give to the scholars special accomplishments in this matter. In Europe halls are now considered absolutely necessary for the uses of scholars in the public schools.

#### EFFECTS OF SCHOOL LIFE UPON THE EYES OF SCHOOL CHILDREN.

By DR. C. R. AGNEW.

This paper was read by Dr. Webster, a co-worker of Dr. Agnew, and illustrated by diagrams.

Dr. Agnew states, that Herman Cohn, of Breslau, published in 1867 the results of observations made upon the eyes of 10,060 school children. He established the fact that school life in his country was damaging the eyes of scholars to a most alarming degree. He was followed by Erismann, of St. Petersburg, and others who showed that elsewhere the same results were being produced. The broad fact was evidently demonstrated, that wherever children were brought under observation, and the effects of the use of their eyes upon minute objects carefully noted, nearsightedness, *a grave malady*, was found to exist. That this malady was found less frequently and then generally only in a mild form, in young children, but that it increased rapidly in frequency and gravity, as these children were pushed forward in their education from the lowest to the highest schools. Cohn, for example, found that the nearsightedness rate in village schools was less than 2 per cent. that it had increased, however, to more than 26 per cent. in the gymnasium (schools about of the grade of most of our colleges in the United States) and that in the Breslau University, out of 410 students examined *not one-third* had normal eyes.

Observations were recently made upon 2,884 eyes in this country. The plan followed is essentially that of Cohn, so that the results might be compared with those of so industrious and careful an observer. The sources from which the data have been drawn are the district, intermediate, normal and high schools of Cincinnati, Ohio (the examinations made by Drs. D. B. Williams and Ayers), from the Polytechnic School in Brooklyn, N. Y. (examinations by Dr. J. S. Prout and Dr. Arthur Mathewson), and from the New York College, New York (examinations by Dr. W. Cheatham).

The following is a summary of tables accompanying this paper: In the Cincinnati schools, the number of eyes examined was 1,264. In the district schools 13.27 per cent. of the scholars were near-sighted. In the intermediate schools 13.8 were near-sighted, and in the normal



Dr. D. F. Linn, of Boston -  
Sec. of Health Dep't Amer. Soc. Sci. Education.

done; but a strong sentiment against such injudicious methods is observed to be springing up in the minds of teachers.

"Fifth. The amount of study required has not often been found so great as would harm scholars whose health is otherwise well cared for.

"Sixth. Teachers who neglect exercise and the rules of health, seem to be almost certain to become sickly or to 'break down.'

"Seventh. Gymnastics are peculiarly needed by girls in large cities, but with the present fashion of dress, gymnastics are impracticable for larger girls.

"Eighth. The health of girls at the period of the development of the menstrual function ought to be watched over with *unusual* care by persons possessed of tact, good judgment, and a personal knowledge of their characters.

"Ninth. One of the greatest sources of harm is found in circumstances lying outside of school life. The social habits of many older children are equally inconsistent with good health and a good education."

GYMNASTICS FOR SCHOOLS, BY DR. S. S. PUTNAM.

\* \* \* Gymnastic training could not fail to be of use in regard to training children who were not naturally strong, and therefore not inclined to take part in outdoor sports, which are, of course, beneficial to the healthy and vigorous among our children. The benefits resulting from systematic gymnastic training are, too, decidedly different from those accruing from ordinary outdoor sports. The former scientifically trains special groups of muscles and confers special benefits upon the bodily system. Skilled instructors are, of course, required, and Dr. Putnam maintained that the result of such training was to promote general health, and to bestow special accomplishments.

It is not necessary that very great muscular power should be developed, as that is not necessarily conducive to good health, nor does it always accompany it. One way in which school children may be greatly benefited is by helping them perfect the process of respiration. This was demonstrated by the work done by Prof. Monroe with the children of the Boston schools. Good breathing is by no means common, and the singing teacher has always much to accomplish in this respect. Instruction in this regard may not only give vastly increased power to healthy persons, but it may save many who are affected by lung disorders from early deaths. Dr. Putnam thought Prof. Monroe's little book the best treatise upon this subject, while most German and French works on gymnastics, are very deficient in this respect. For the exercise recommended by Prof. Monroe no apparatus is required, or special costume, and for walking and running a large empty room is all that is needed.

Proper physical instruction in our schools would also relate to the sitting of the scholars, to proper methods of studying or of mental application, to proper means of ventilation, etc. It is a notorious fact that many cases of injury to the spinal column arise from improper postures while sitting. Among 731 pupils at Neufchatel, sixty-two cases of this sort were observed among 350 boys, and 156 cases among 381 girls.



and high schools 22.75 were near-sighted. In the academic department of the Brooklyn Polytechnic 9.15 per cent. were near-sighted, while in the collegiate department of the same school, 21.83 were near-sighted. In the introductory class of the New York College 21.86 per cent. of the students were near-sighted; of the freshmen, 26.2 per cent. were near-sighted, and of the sophomores 22.72. The summary of all is that, of 2,884 eyes examined, 1,886 eyes had normal refraction, 538 were near-sighted, 227 were over-sighted, and 152 astigmatic; and of 81 the refraction was not noted. Acuity of vision: 2,300 eyes had vision equal 1; 226 equal  $\frac{2}{3}$ ; 106 equal  $\frac{1}{2}$ ; 43 equal 2-5; 49 equal 2-7; 40 equal 1-5; 28 equal to 3-40; 19 equal to 1-20; 8 able only to count fingers; 1 with no perception of light; 4 vision not noted.

#### THE HEIGHTS AND WEIGHTS OF SCHOOL CHILDREN.

DR. LINCOLN explained this subject on a plan prepared by DR. H. I. BOWDITCH:

"The object of ascertaining the heights and weights of the pupils in the public schools of Boston, is to determine the rate of growth of the human race, under the conditions which Boston presents. It is of course very desirable, that similar observations should be made in other parts of the country in order to enlarge the number of data from which conclusions may be drawn. This country offers an excellent field for investigations of this sort, not only on account of the wide range of climatic conditions which it presents, but from the fact that the inhabitants are the immediate descendants of a good number of different races. I we can compare, therefore, the rate of growth of a race in their native land, with the rate of growth of the same race after immigration to this country, we shall be able to study the effect of transplantation into new climatic conditions; and if we compare together the amount of change which the rate of growth of different races undergoes after immigration to this country, we shall have data for estimating the relative adaptability of the races in question to the new climate. Moreover, if it shall be found that the rate of growth of the female sex is more seriously modified by emigration than that of the male sex, light may be thrown on the question of the cause of the alleged inferiority of the physique of American women. As the value of observations of this sort depends entirely upon their accuracy, it is important that the height should be measured without shoes on rods graduated to one-tenth of an inch. The weight should be determined on scales weighing pounds and ounces, and allowance should be made for the weight of the clothing."

Dr. Lincoln then gave some drawings as to how desks should be arranged for school pupils, showing that they should be made so as to give as much comfort to the scholars as was possible, and at the same time make the position as healthy a one as can be secured. The seat should be close to the desk, and any desk so far from the seat as to allow the pupil to stand up between them is objectionable; and concluded his report with a brief paper, summarizing the *Sanitary Requirements of School-houses*.



While we regret the want of space to also give an abstract of much instructive discussion on the subject of Dr. Lincoln's report, enough has been given to satisfy the attentive reader, that more headway may be made by contracting the scope of inquiry. Not that there is anything unnecessary in the ground laid out by the secretary, but that it is as utterly impracticable for him, as it is for any one else to select *in advance*, "suitable persons for separate investigation and report" on *any* subject, with a promise of getting reports that will be unquestionably acceptable.

Mr. Eaton, United States Commissioner of Education at Washington, D. C., said he was much interested in everything that pertains to the hygienic condition of schools, and especially in this subject. In regard to ventilation, there is a difference of opinion of prominent gentlemen in the medical profession, and then what will suit one State in the matter of ventilation and heating will not suit another. The procuring of facts relative to these matters, he has considered a matter of great importance, and this he has in his office attempted to do.

This view of Mr. Eaton applies to the whole category of subjects presented. A better way would be to select a number of suitable persons to investigate each single subject, and let it be the work of the section to elaborate from such reports the practical features, as far as may be, applicable to all.

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AMUSING THE BABY.—When the baby first opens its eyes, it is not uncommonly induced to gaze upon the light. "Ze putty zed yight," is supposed to be exquisitely amusing. Had it power to tell of the torment thus inflicted, we should hear a very different story. And then it is jumped at, screamed at, tossed up into the air, and otherwise startled, until its nerves are disturbed beyond quieting without medicine.

It is a subject of marvel to most people that so many children die in infancy, but to an observing mind the wonder is that any children live to maturity. When you and I feel miserable, we want to be left in quiet. Repose is the sweetest remedy for nervousness or other ills; but baby is trotted, bounced, toted, "ketchy-ketchied," chucked under its chin, poked in its cheeks, or somebody's thumb is thrust into its toothless mouth, irrespective of a need of ablution, and then if baby isn't happy it is reputed very irritable. Tickling the baby's feet, creeping the fingers like the motion of a mouse across its breast, and up into its fat, sensitive neck-wrinkles, is another mode of amusing baby. Of course the child laughs, and the idiots who torment it forget that it is the same expression with which they reply to a similar process from the hand of some mischievous but torturing friend; and yet we all know that this laugh from a man is an hysterical outcry of nervous irritability. When the laugh ceases, weariness brings weeping, or perhaps a restless and unrefreshing sleep, followed by depression, and probably by indigestion and colic.

Nothing should ever be done to startle a child—even a too frequent playing of bopeep, if violent, has been known to bring on St. Vitus' dance. All surprises are dangerous to the nervous system, just as all sudden atmospheric or dietetic changes are very unhealthy, and sometimes fatal. If music is selected to please the young child's ears, it should be gentle and soothing.



End of 49th Lecture, 1870.

# Hygiene of Prisons —

Exercise — air blow — mental occupation —

"Separate system"

Gibson

See

Pumps not deep enough

lodging room  
Hours of meals

ventilation

monitors & ironclads

Cushing

Cholera on emigrant ships

Yellow fever

Cargoes — purified

Pumps Run from Tide water — (at sea)

What enemy the  
sailor is water on  
& in his ship

Mines

See over



(mine  
Pittston (Pa.) shaft  
hoisting apparatus burned  
May 1871 - Over 30 men  
supported - only the one  
outlet.

School

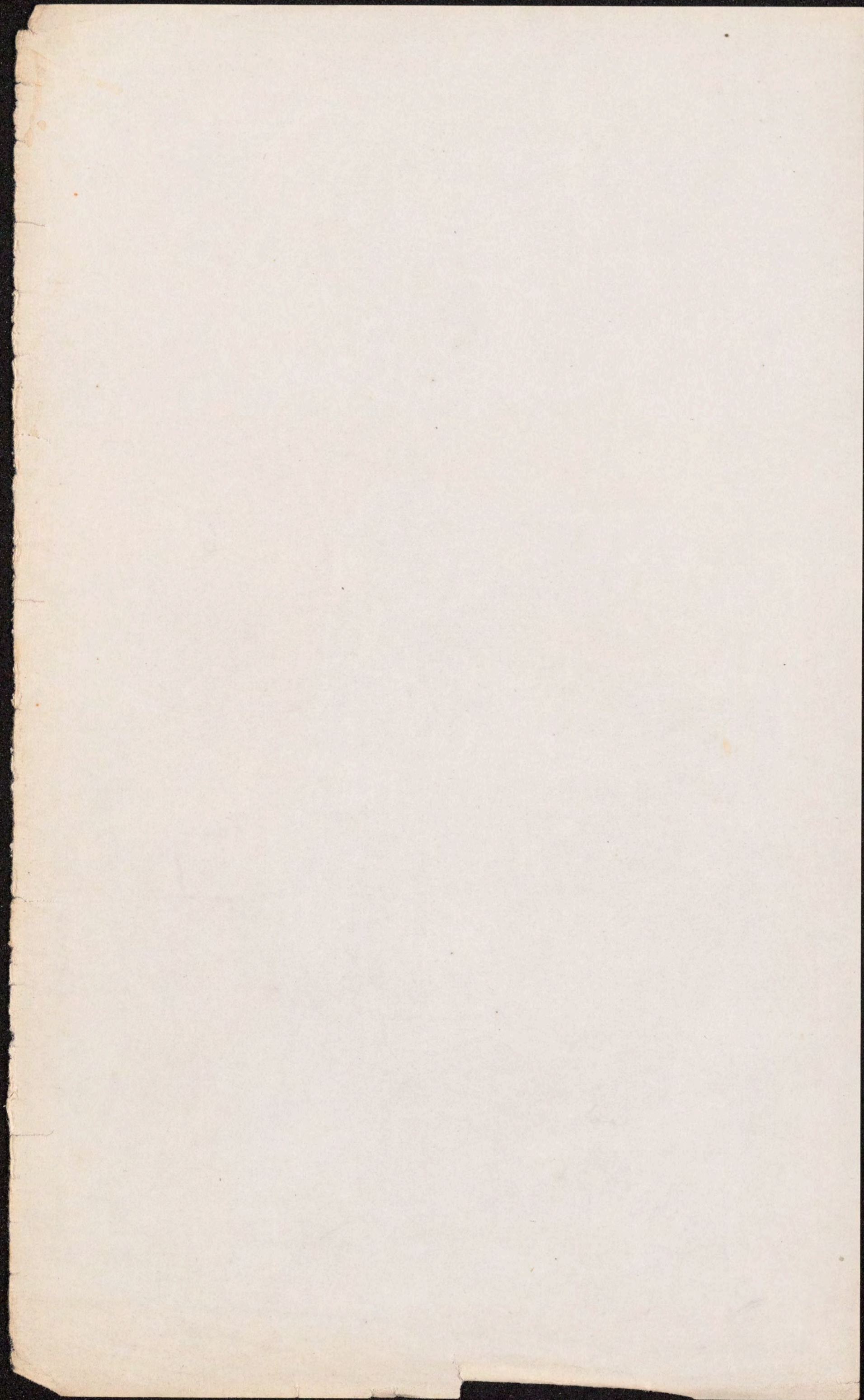
Hygiene!

Too long confinement -

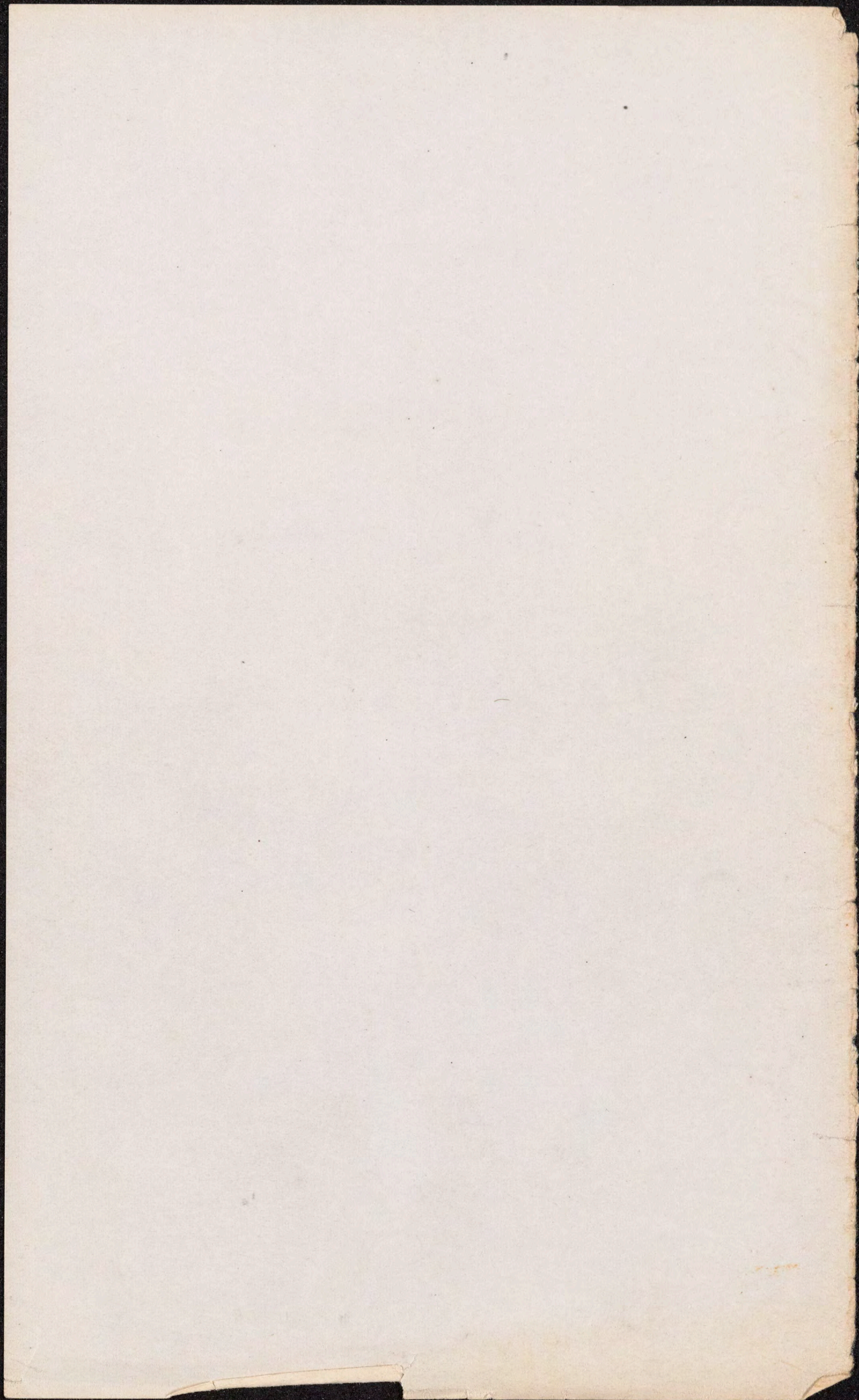
Bad positions -

Bad lights -





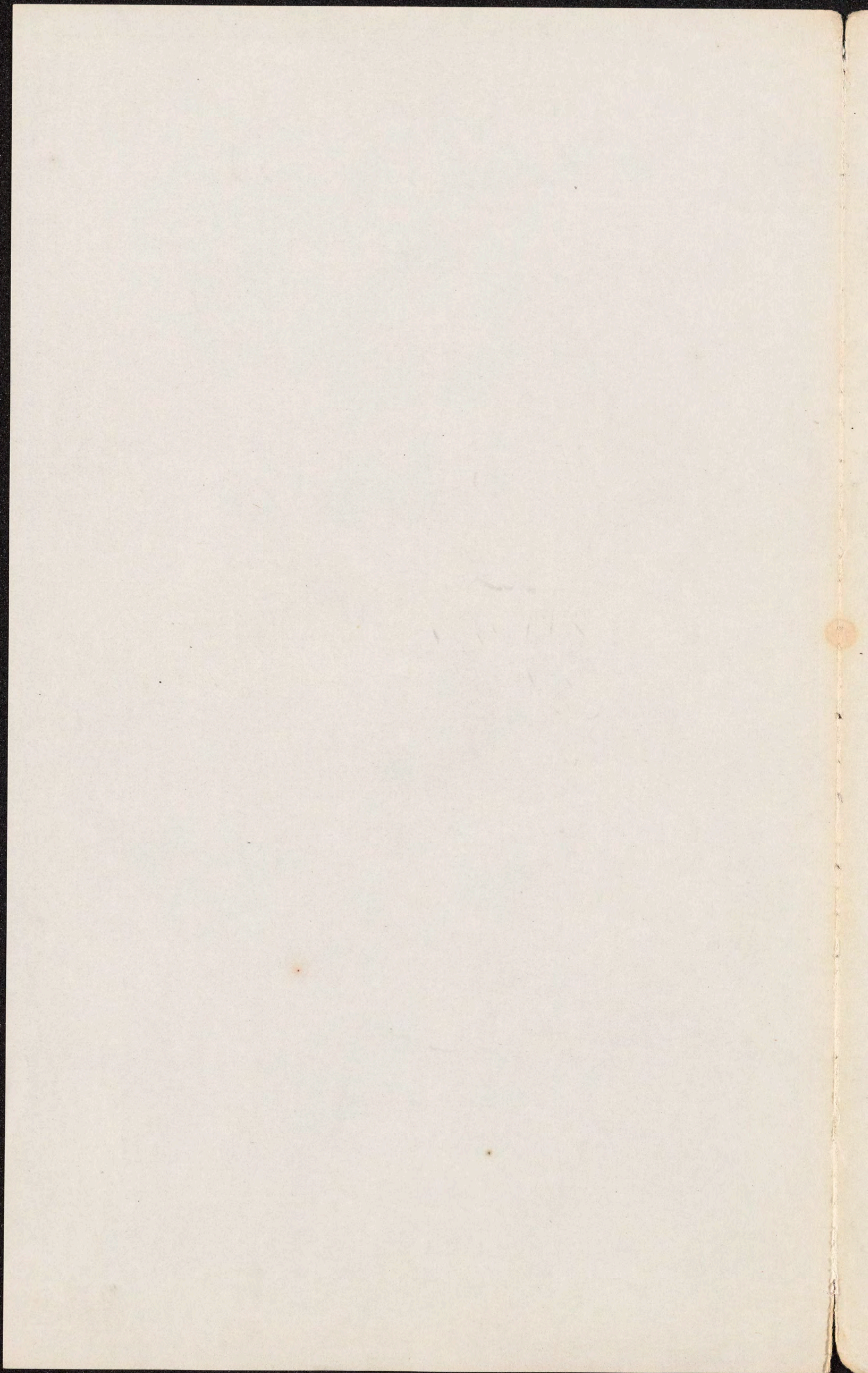






Seasons,







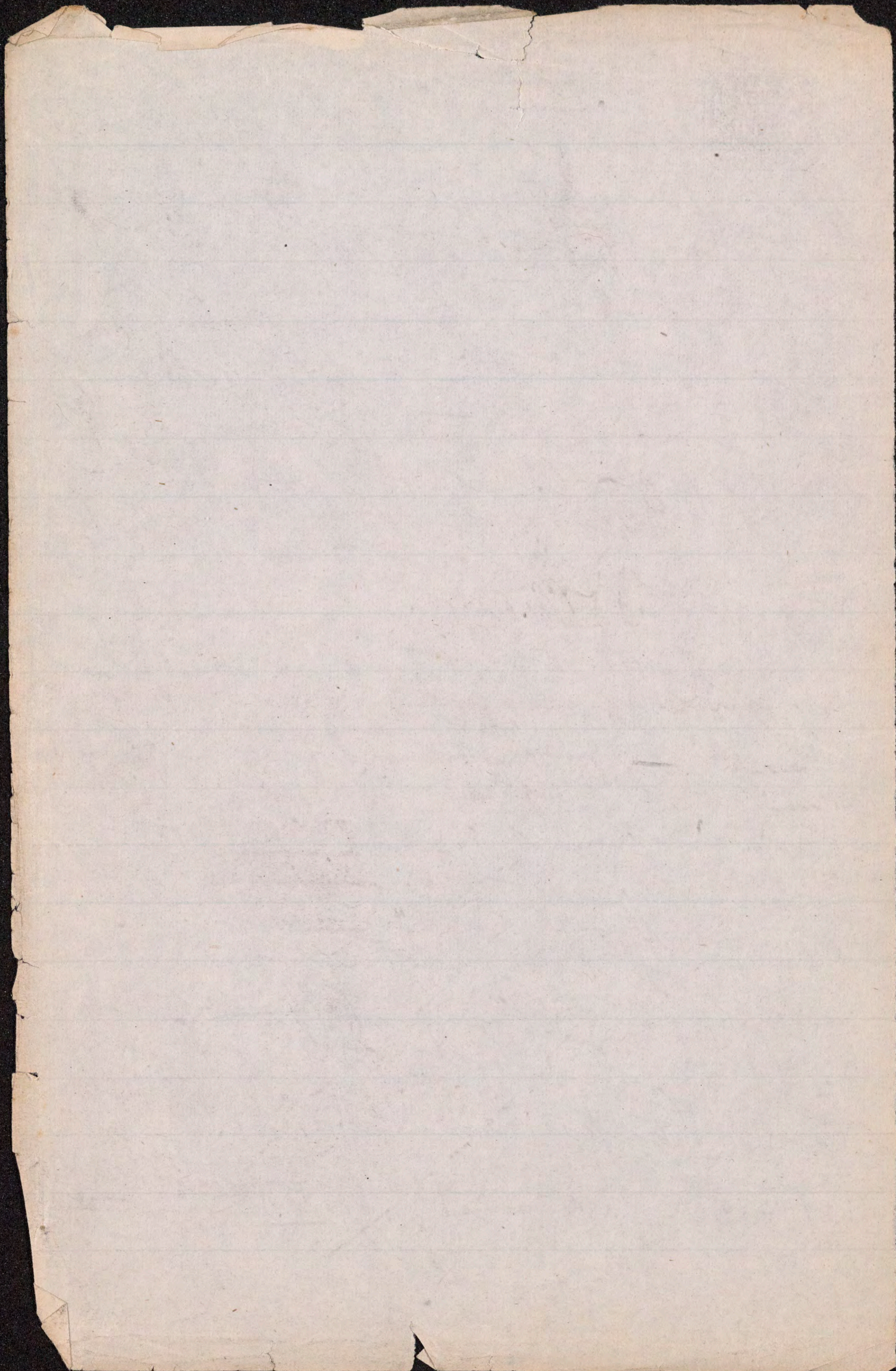
# Seasons

Movement of the earth around the  
Sun, — & the inclination of the  
equator to the earth's orbit or  
<sup>the</sup> ecliptic, make the variation of  
the seasons.

If equator in the same plane  
with the ~~plane~~ of the ecliptic <sup>very</sup> much  
less variation would exist —

Seasons not always &  
everywhere divided alike — By  
ancient Greeks summer was made to last  
131 days; autumn 51, winter 135 Spring  
only 68 days —







Some even now understand  
by the Spring months March,  
April, May, — Summer, June  
July, August — Autumn Sept.,  
Oct. Nov. — Winter Dec.  
Jan. February:

Others — Jan. Feb. March  
Winter — April May June Spring  
— July, Aug. Sept. ~~Summer~~ — &  
Oct. Nov. Dec. Winter:

Best apprehended is the real  
difference as the leafing Spring,  
flowering Summer, fruiting Autumn,  
& Dormant Winter, that is, out  
of the tropics, where Summer is perpetual  
of the ~~poor~~ poor zone, where it is always



In California there is little or

no rain from April or May

to October



In sub-tropical climates a rainy & dry season  
make the greater part of the year.

January is the coldest  
month in all (N.) latitudes.

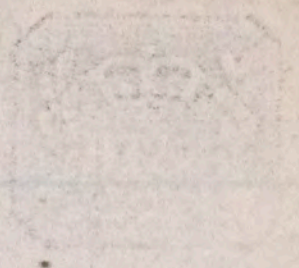
July the hottest, north of  
 $48^{\circ}$  N. Lat. — August  
South of that.

2<sup>nd</sup> rank in January coldest in  
England, country; 3<sup>rd</sup> rank, in London

2<sup>nd</sup> rank in July hottest in  
England, country — 3<sup>rd</sup> rank, later  
in London —

Extreme heat oftenest in temperate zone  
& as high almost as tropical <sup>2<sup>nd</sup> & 3<sup>rd</sup> rank</sup>  
<sup>hottest days alike.</sup>  
 $146^{\circ}$  in sun, Bagdad —  $120^{\circ}$  shade at  
Musal —  $134^{\circ}$  &  $136^{\circ}$  in desert of Africa (Lingden)  
<sup>useful  $150^{\circ}$</sup>   
about same in Maryland <sup>a few years ago</sup>  $172^{\circ}$  lowest  
 $248^{\circ}$  in glass box. — (attained by wind)





10-11-12

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

LABORATORY OF PHYSICAL CHEMISTRY

CHICAGO, ILLINOIS

RECEIVED

1912



...society, it is of interest to recall a series of experiments made some years since by Sir John Herschel, at the Cape of Good Hope. Near the extremity of the cape, between Table Bay on the one side and False Bay upon the other, is a sandy region known as the Cape Flats, upon which the sun pours down its rays without hindrance. Herschel's attention having been attracted by the very high temperature which the surface soil of these flats acquires under exposure to sunshine, he proceeded to make careful thermometrical observations in the spring of 1837 (October and December), and determined that the temperature of the sand and vegetable mould was often as high as  $140^{\circ}$  to  $150^{\circ}$ , and this in the open field. "When, however, the heat communicated from the sun is confined and prevented from escape, and so forced to accumulate, very high temperatures are attained. Thus, in a small mahogany box, blackened inside, covered with window-glass fitted to the size, but without putty, and simply exposed perpendicularly to the sun's rays, an enclosed thermometer marked, on November 23, 1837,  $149^{\circ}$ ; on November 24,  $146^{\circ}$ ,  $150^{\circ}$ ,  $152^{\circ}$ , etc., etc. When sand was heaped round the box, to cut off the contact of cold air, the temperature rose, on December 3, to  $177^{\circ}$ ; and when the same box, with its enclosed thermometer, was established under an external frame of wood well sanded up at the sides, and protected by a sheet of window-glass (in addition to that of the box within), the temperatures attained on December 3 were, at 1.30 P.M.,  $207^{\circ}$ ; at 1.50 P.M.,  $217.5^{\circ}$ ; and at 2.44 P.M.,  $218^{\circ}$ ; and that with a steady breeze sweeping over the spot of exposure. Again, on December 5, under a similar form of exposure, temperatures were observed, at 0.19 P.M., of  $224^{\circ}$ ; at 0.29 P.M.,  $230^{\circ}$ ; at 1.15 P.M.,  $239^{\circ}$ ; at 1.57 P.M.,  $248^{\circ}$ ; and at 2.57 P.M.,  $240.5^{\circ}$ . As these temperatures far surpass that of boiling water, some amusing experiments were made by exposing eggs, fruit, meat, etc., in the same manner (December 21, 1837, *et seq.*), all of which, after a moderate length of exposure, were found perfectly cooked—the eggs being rendered hard and powdery to the centre; and on one occasion a very respectable stew of meat and vegetables was prepared, and eaten with no small relish by the entertained bystanders. I doubt not that by multiplying the enclosing vessels, constructing them of copper blackened inside, insulating them from contact with each other by charcoal supports, surrounding the exterior one with cotton, and burying it so surrounded in dry sand, a temperature approaching to ignition might readily be commanded without the use of lenses."



life and personal character of Louis Philippe. Since the death of Queen Marie-Amélie there have been published portions of a series of letters from the king to his sister, Madame Adélaïde, which escaped the grasp of M. Taschereau in 1848. They extend from 1839 to 1845, and embrace all sorts of topics, from his first impressions of Lord Palmerston's Eastern policy to the minutest particulars of his domestic life. They are written without any constraint to this sister, who exercised such a powerful influence on him, and are mere off-hand and familiar talk. We see here all the anxiety of this citizen-king, this "commis-voyageur de la maison Orléans," as Heine called him, for the welfare and safety of his children and grandchildren; his troubles during the illness of the Comte de Paris, who would be very hungry and cry for "soufflé;" his annoyances caused by the gardeners at St. Cloud and the architects at Fontainebleau. He tells of his arrangements for a review, in which he speaks of his desire of pleasing "ce bon Cass," as he styles the American minister; and of the suitors who come for the hand of the Princesse Clémentine, whom he nicknames Clem. We hope the whole of the letters will be published, as they are valuable illustrations of the peculiarities and foibles of a king whose motto was "Never mind."

—The great work of Dr. Bastian, "The Nations of Eastern Asia—Studies and Travels," will soon be published in five volumes. The first volume will bear the title of "The History of the Indo-Chinese," and is based on their historical books and oral traditions. The author is trying to fill a void that has existed already too long, and has availed himself of a long stay in Further India to collect materials, both written and oral. The second, third, and fourth volumes will contain the journal of his travels in Burma in 1861, his residence in Siam and travels in Cambodia and Cochin China in 1863, and his journey through the Archipelago to Japan and China, and by the overland route from Peking through Mongolia and Siberia to the Caucasus in 1864–5. To illustrate the literature of the nations of Eastern Asia, translations of their poems, romances, and fables will be given. In the last volume the author purposes to show the present state of Buddhism as it exists in South-eastern Asia, and as he saw it in his intercourse with the monks, and a comparison of it with Foism and Lamaism.

—One of the best Hebrew scholars of Europe has just died, Dr. Hupfeld, professor in the University of Halle. He was born at Marburg, in 1796, and devoted himself to the study of philology and theology. In 1819

End of  
8th  
Lecture,  
1872.



Hippocrates made some sagacious observations  
upon the influence of the periods of the year upon health & sickness.

As to Predisposition to

Diseases, in temperate climates  
best to divide  
the year into the cold & cool  
half — late fall, Winter & early  
Spring — & warm & hot  
half, — late Spring, Summer, & early fall.  
Of first —

Respiratory affections

& rheumatism — espec. best febrile & also  
contagious epidemic & typhoid — incl.  
typhus, & erysip. & purp. fever.

Of second — Stomach & Liver &  
bowel affections — & malarial fevers

with Yellow fever & Cholera. (Full order of  
Deaths of old in very cold times — infants hot, here.)

all unreasonable weather is unhealthy.



# Order of autumnal disorders

in & near Philadelphia:

Chol. morbus

~~Intermittent~~ fever, Remittent,

Dysentery -

For the year:

Cool & Cold half -

Croup,

Bronchitis

Pleurisy

Pneumonia

Diphtheria

Typhus

Erysipelas

Scarlat fever

Small pox

measles

Scarlet fever

Rheumatism

Warm & Hot half -

Cholera morbus

Cholera infantum

Epidemic Cholera

Diarrhoea

Dysentery

~~Intermittent~~ Remittent

Yellow Fever

Typhoid



←  
Among 3 millions of deaths  
in diff. countries of Europe, Casper  
found Spring the most fatal  
Season — Summer the least so.

I believe it is the same in Philadelphia,  
with adults; but most young children die in summer here.  
March is a particularly trying month  
to consumptives here.  
More very old people die in the coldest weather.

---

Go back to Campbell's notes!

---

now, on  
Climate.



California —

No rain from April or May  
to October —

Let maritime — not and  
except desert & S.E. part.



## THE RELATIONS BETWEEN HUMAN MORTALITY AND THE SEASONS OF THE YEAR.

1574

At the anniversary meeting of the Scottish Meteorological Society, a very valuable paper was read by Dr. Arthur Mitchell, and the Secretary, Mr. Alex. Buchan, giving an account of their investigations on the subject of the influence of the seasons on human mortality at different ages as caused by different diseases. The authors have calculated the weekly average death-rate of London for the past thirty years for thirty-one diseases, together with the averages of temperature, moisture, rain, etc. Considering the weather experienced in the course of the year as made up of several distinct climates differing from each other according to the prevailing temperature and moisture, and their relations to each other, the influence of these climates, characterized respectively by cold, cold and dryness, dryness and heat, heat, heat and moisture, and cold and moisture, on the mortality was pointed out. The weekly mortality from all causes and at all ages shows a large excess above the average from the middle of November to the middle of April, from which it falls to the minimum in the end of May; it then slowly rises, and on the third week of July shoots suddenly up almost to the maximum of the year, at which it remains till the second week of August, and thence falls as rapidly as it rose to a secondary minimum in October. Regarding the summer excess in the death-rate, which is so abrupt in its rise and fall, it was shown that it is wholly due to one section of the population, viz., infants under five years of age, none of the curves for the other ages showing an excess in the death-rate from all causes during the summer months; and it was further shown that the summer excess is due not only to the deaths at one age, but to the deaths from one class of diseases, viz., bowel complaints. The importance of weekly averages in discussing these sudden fluctuations of the death-rate to the changes of the weather was pointedly referred to. Deducting the deaths from bowel complaints from the deaths from all causes, the curve assumes a simple form, viz., an excess in the cold months and a deficiency in the warm months. In other words, the curve of mortality is dictated by the large number of deaths from diseases of the respiratory organs. The curve of mortality in London, has thus an inverse relation to the temperature, rising as the temperature falls, and falling as the temperature rises. On the other hand, in Victoria, Australia, the curves of mortality and temperature are directly related to each other—mortality and temperature rising and falling together. The character of the curve of mortality in Victoria is impressed on it by the deaths of persons below the age of five; and among such young persons the special diseases which determine this influence are diarrhoea and dysentery. This peculiarity arises from its higher mean temperature,  $57^{\circ}6$ , as compared with that of London,  $50^{\circ}0$ .



In London also during the hottest months of the year the curves of mortality and temperature rise and fall together, whereas in Victoria the curves are throughout the whole year directly related; for though doubtless the deaths from diseases of the respiratory organs fall as the temperature rises, and rise as the temperature falls, yet the number of deaths from these diseases is, owing to the comparatively high winter temperature, never sufficiently large to influence the curve of the whole death-rate. The curves of mortality for bronchitis and pneumonia at different ages, prove that the fluctuation is much less for pneumonia than for bronchitis, and that the excess in both cases of infant mortality is great, but not nearly so great as the infant mortality for diarrhoea. The curves show that the maximum mortality from the different diseases group around certain specific conditions of temperature and moisture combined, the general result of which, as regards the principal diseases, may be thus roughly stated:—

Character of Weather.

Cold

Cold and dry

Warm and dry

Warm and moist

Cold and moist

Maximum Mortality.

Bronchitis, pneumonia, asthma, etc.

Brain-disease, convulsions, whooping-cough

Suicides, small-pox

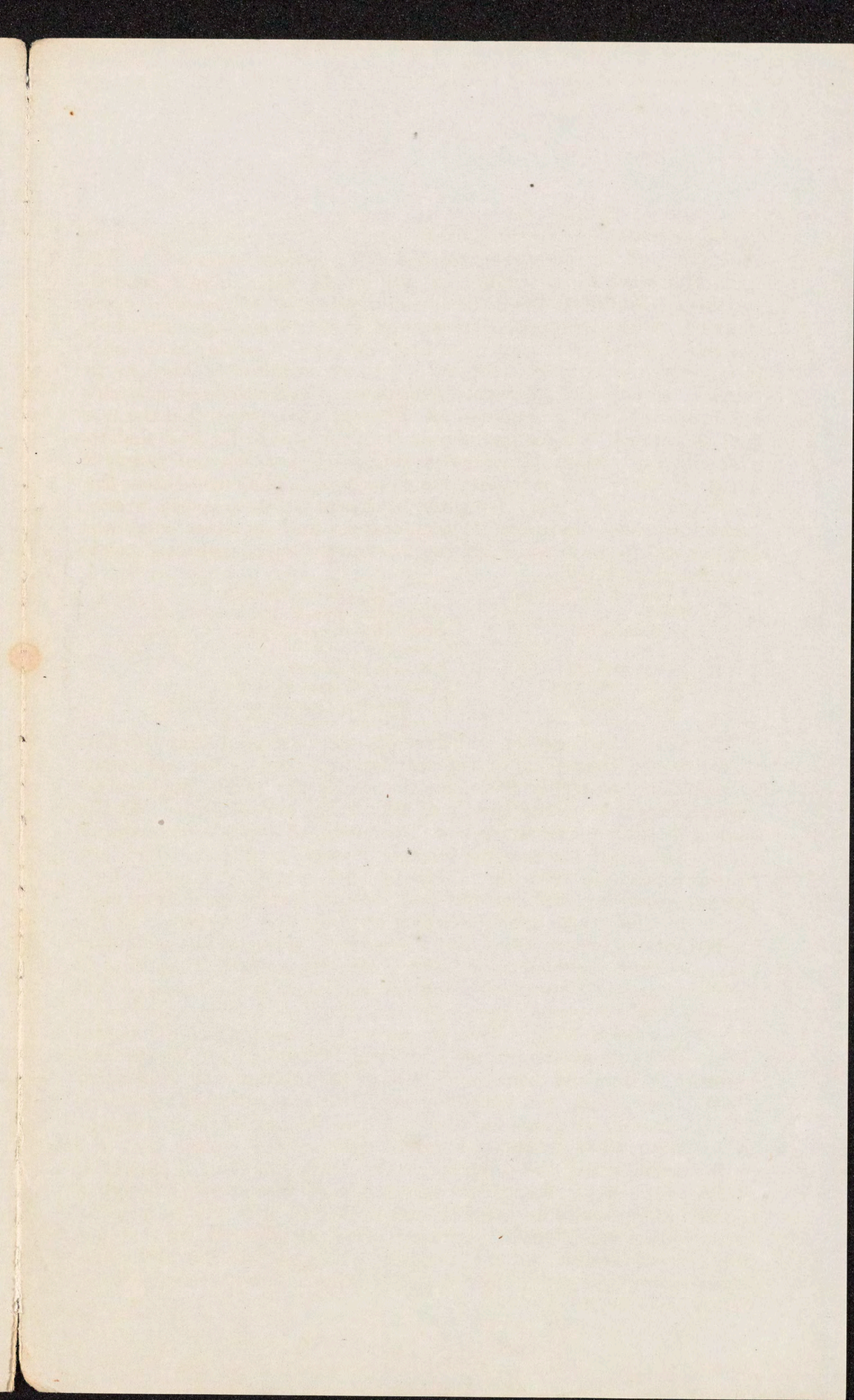
Diarrhoea, dysentery, cholera

Rheumatism, heart-disease, diphtheria, scarlatina, measles, croup.

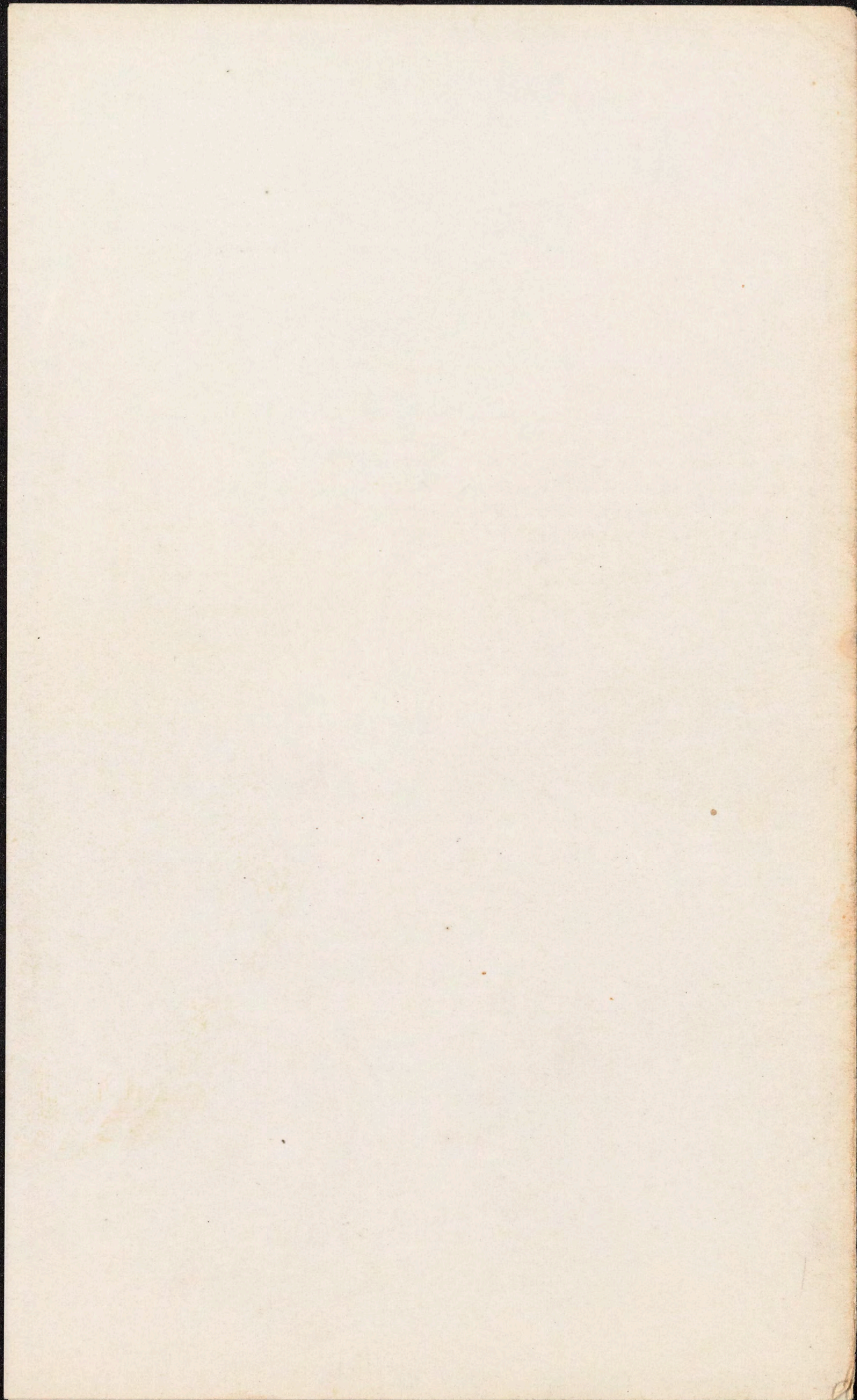
The deaths from cancer and liver disease show no distinct relation to weather. The period of the year least marked by the occurrence of maximum mortality from any disease, is the warm dry weather which prevails from the middle of May to the end of June. At this season the only maximum is a well-pronounced secondary maximum for measles; and the maxima for suicides and small-pox, which are, however, extended from the middle of April into these months. Convulsions, teething, and atrophy and debility have a secondary maximum in the warm moist weather of July and August. In the United States, where the heat is greater in summer, the secondary maximum for convulsions is more distinctly marked than that of London; and in Victoria the summer maximum is the only one that appears. The contrast offered by certain curves to each other in all points is very striking. Thus the curve for whooping-cough begins to rise above its average in the middle of December, attains its maximum in March and April, and falls to the minimum in September and October, while the curve for scarlatina is exactly the reverse of all this, having its minimum in spring and its maximum in autumn. It was inferred from the general teaching of the curves, that if a curve representing the progress of the death-rate from a particular disease were given for a place whose climate was known, though it might be impossible to name the exact disease, it would be possible to say with a considerable degree of certainty whether, for instance, the nervous system, or the respiratory organs, or the abdominal organs were involved in the disorder which caused the deaths.—

*Nature*, July 16, 1874.











Climate.



Up in balloon  
 started at 10:00 - 3700 ft.  
 1000 ft. up, about 2000 ft.  
 2000 ft. up, was in height  
 3000 ft. up, also



10 } 6 } 5 } 6  
 2

100 } 60 } 20 } 60  
 20 } 50 }



# Climate —

## 1. Definition

Aggregate of local conditions which affect human and organic life. ~~part of health~~

## 2. Causes

1. Lat. 2. Alt. 3. Oceanic mod. 4. Outlines 5. Winds 6. Clouds 7. Rain 8. Clouds 9. Rain 10. Clouds

## 3. Resulting elements

# Climate —

Temp. { mean  
Humidit { Extremes  
                  Mutations

Atmosph < Pure  
                  Malaria

## 4. Classification of Climates

By Latitude —  
Isothermal lines different houses

## 5. Examples of various temp.

ratums — (See next p. —

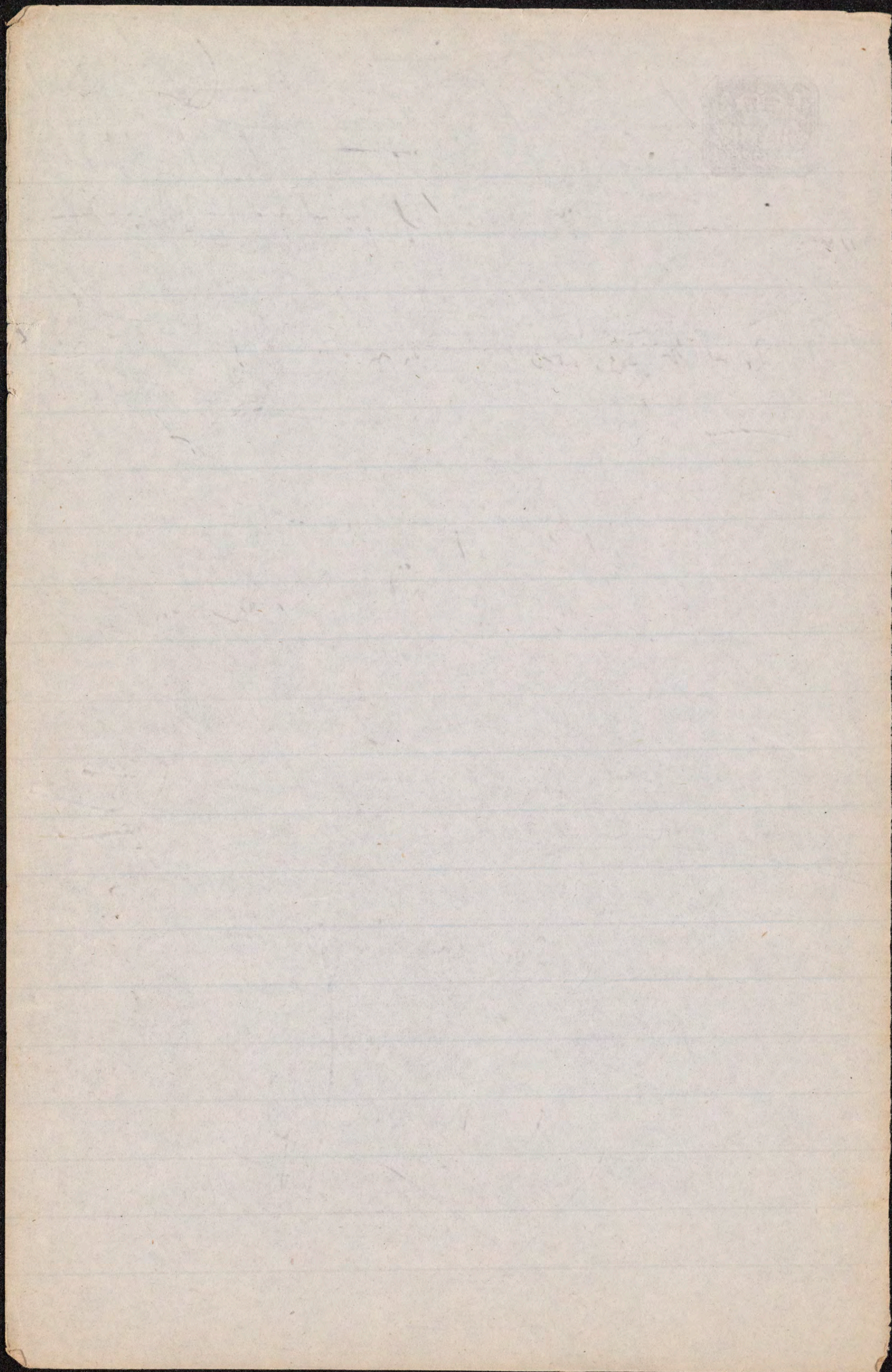
## 7. Ex. - of various amounts of

rain. — (Next p. —

## 8. Comparisons of Amer. &

Eur. & Asia & of the two sides  
of the Equator —



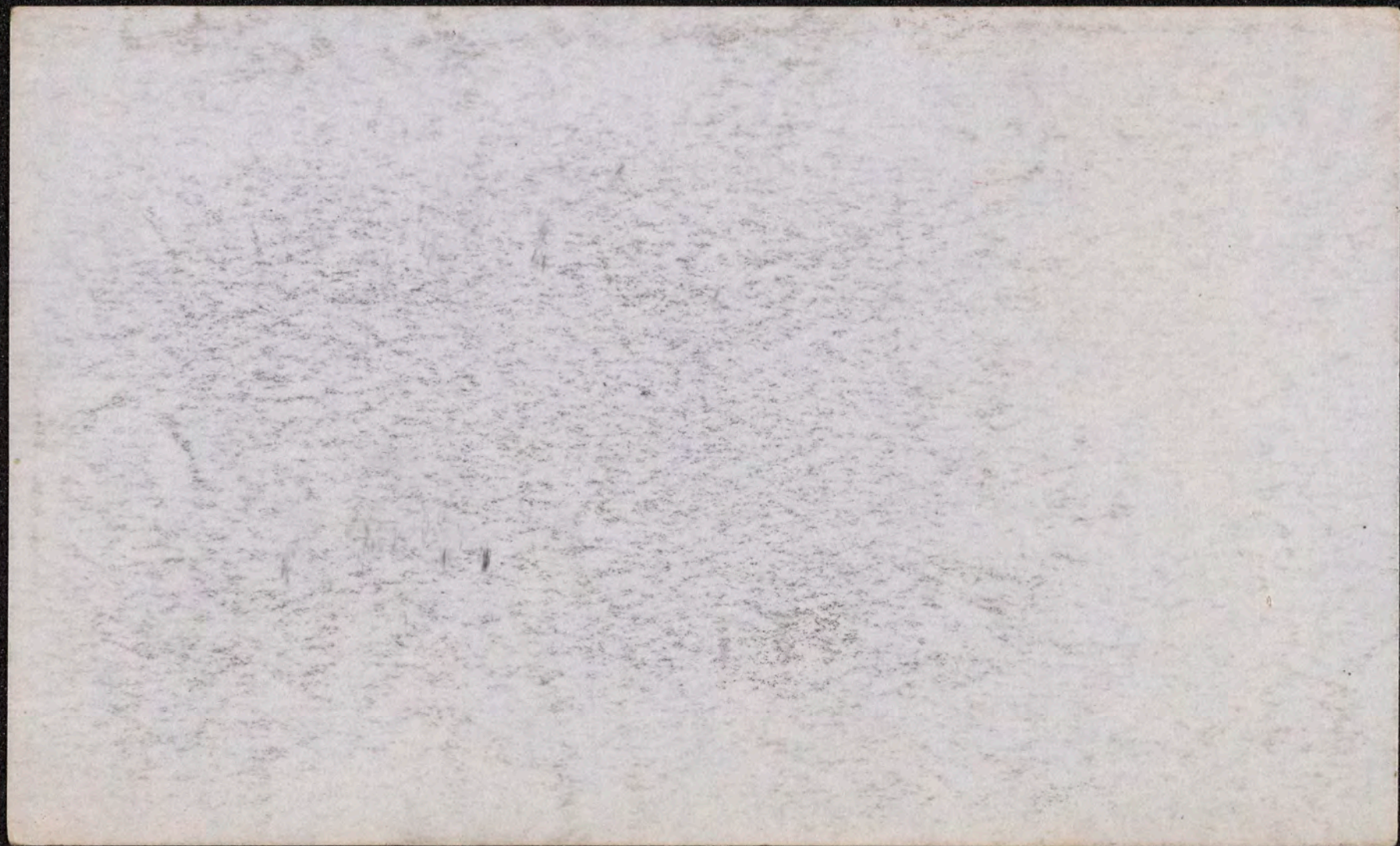




At Fort Muma, California, -  
thermometer  $119^{\circ}$  in shade, June 16<sup>th</sup> 1859

Ass. Surg. Lauderdale Ross - See  
Dr. J. S. Billings' Report on Hygiene  
of U. S. Army in 1875.







100° at New York at Richmond Va. &  
Sunday night, 7<sup>th</sup> — 8<sup>th</sup> Jan. 140

866 — coldest night or  
recd in Philada. — Bangor, Me. 140

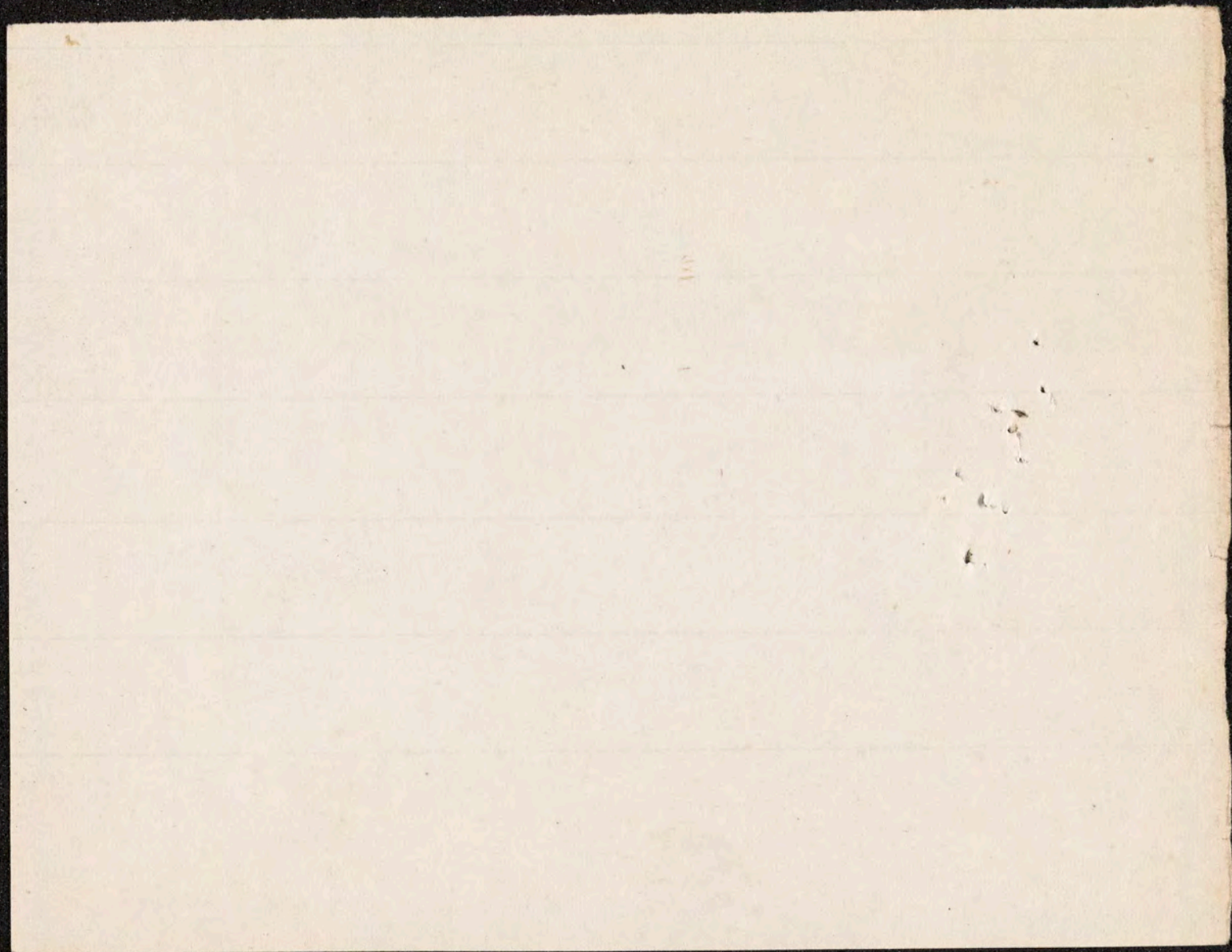
Thermometer 14° below zero.

Monday morning at 7<sup>th</sup> —

10° degrees below zero.  
almost never lower than -10° before.  
It has been -14° at Washington, & -18° at St. Louis; once -18 at Washington.

100° at New York at Richmond Va. &  
Bangor, Me. 140  
Doubt -140°  
2 min. say







Melville Island Coldest

what place - lat.  $74^{\circ} 47'$

Av. for year  $1.65^{\circ}$



Maximum heat in shade in U.S.

at Fort Yuma Cal., &  
parts of Texas — 113°

Highest next, St. Louis — 107°

Washington, D.C. — 103°

Philada. highest — 98°-99°

slightest anywhere in shade — 120°

~~Highest in the sun — 146°-150°~~

Highest mean for the year

in N. America,

Key West, Florida, 76°-77°

Ringold Barracks, 73.7°

Brownsville, Texas, 74°

Fort Yuma, Cal., 73.6

Philada. mean for the year, 52°-53.1°

New York about the same <sup>Yellow Springs</sup> — 52°-51°

New Orleans — 70°

Washington City — 56°

over



40<sup>24</sup>

$\frac{160}{900}$

Although at Victoria in Australia there are few rainy days, at times very much <sup>rain</sup> falls; as 92 inches in 24 hours; once, in Sept. (1856) that much fell in 20 minutes: the following year at the same place 342 ~~in~~ inches fell in 24 hours. (Brit. Am. M. C. Rev. July 1864).

At Vera Cruz, annual mean of rain

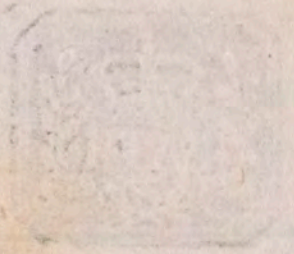
183 in.

Some parts of Louisiana,	68 "
Part of Oregon,	50 "
Los Angeles, Calif.,	3 "
Ceylon, 21 in — India, S. of Bombay —	302 in.
Philippa	42 "
London	20 "

Number of rainy days in S. & W. of England,

171 in a year — 115; Temperature, of old world tropics — 77° per an. S. Am. 34; New, 39.





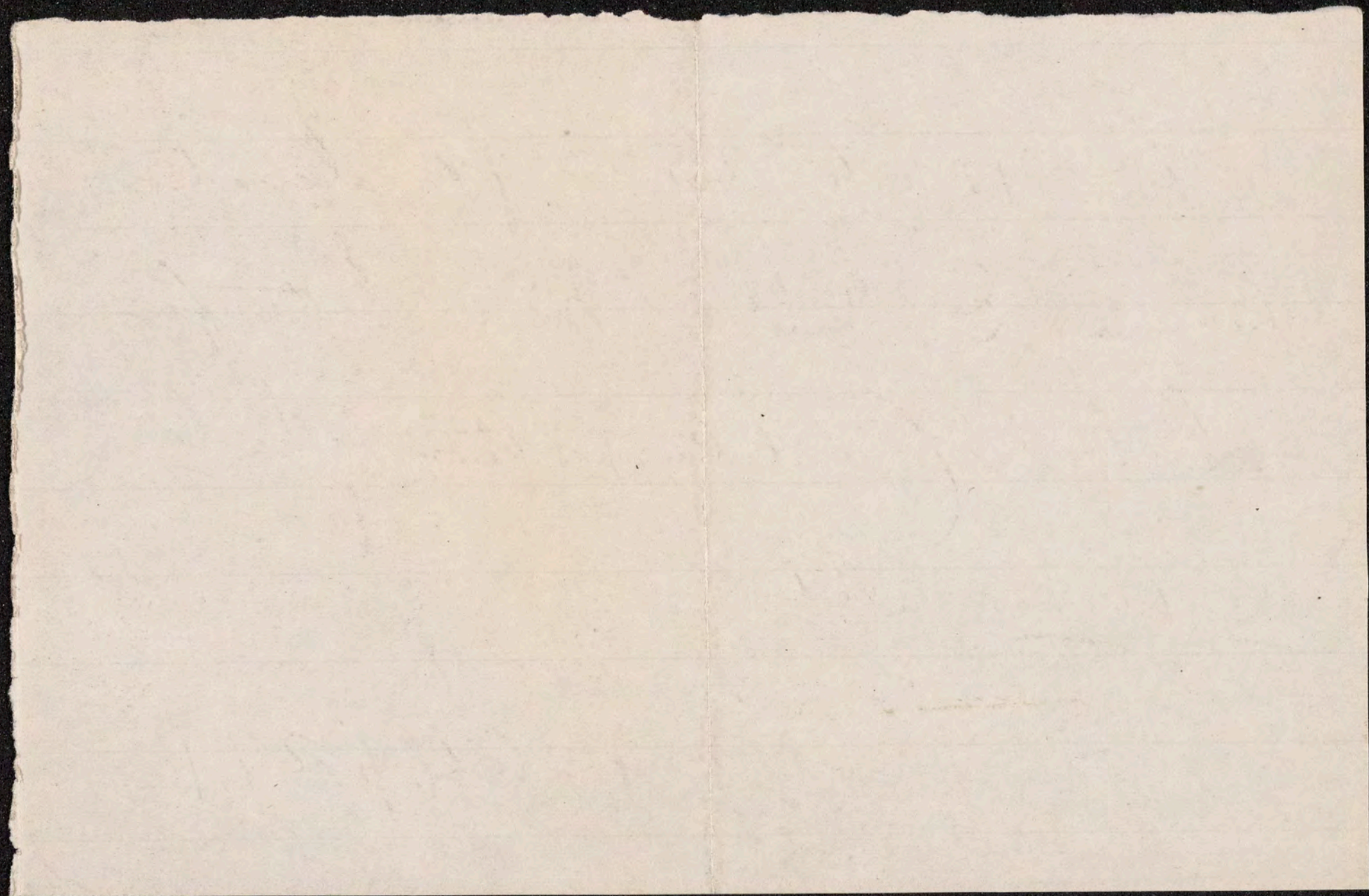


From 1200 to 2500 ft elevation  
shown in E, W. Index better for  
salubrity (with crops) than either lower  
or higher altitudes.

B. J. M. R.

Oct, 64 p 299







Certain Winds -

Besides Trade & Monsoon -

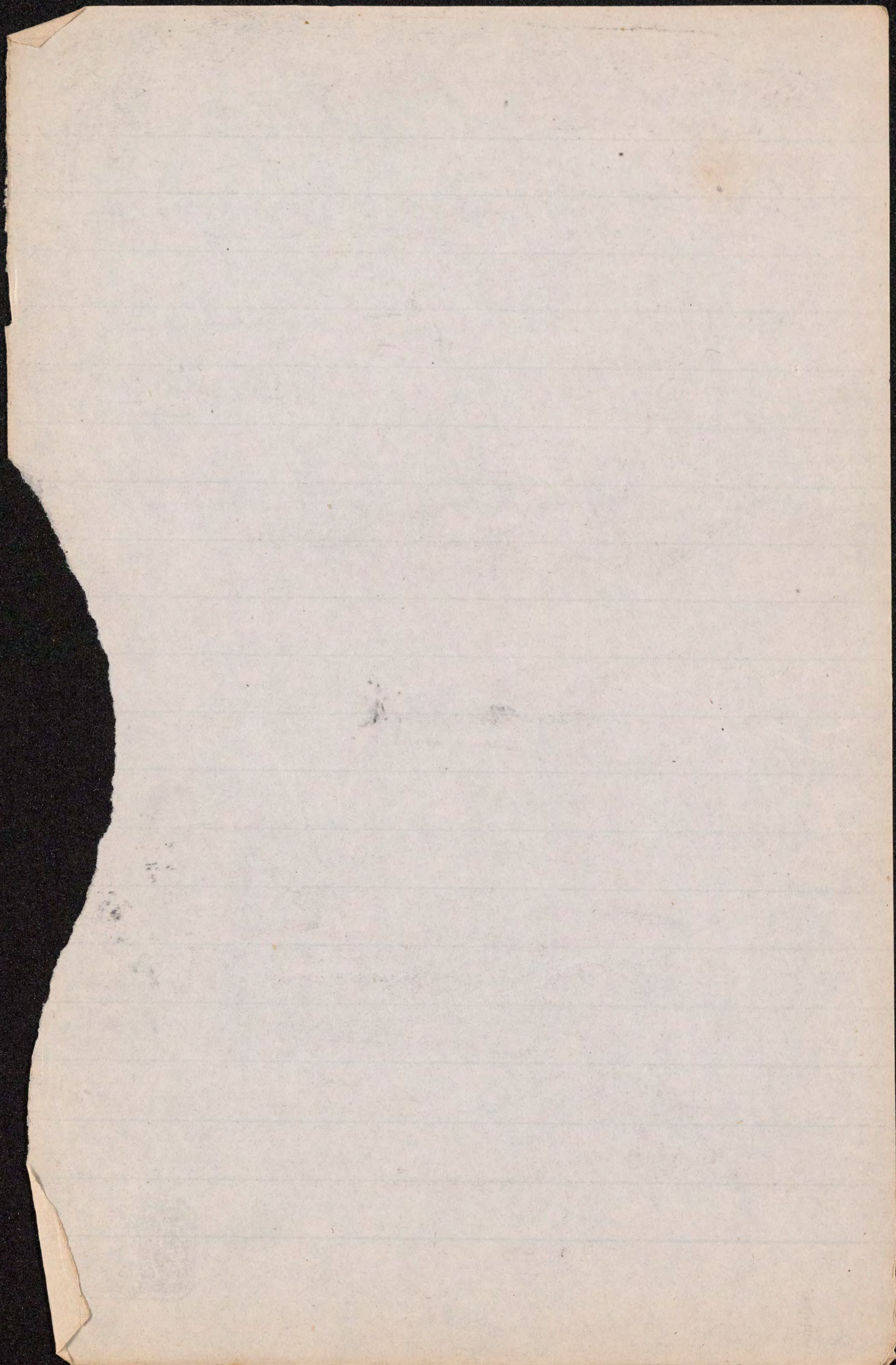
(Harmattan - Simoon - Khamsin -

Sirocco -)

N. Wind of La Plata (Ray)

"Norther" / Texas & the Western States







8. Comparison of E. & W. continents & N. & S. latitudes  
Vancouver Phil 52° / Naples 62° / Peking 52°  
Effects of Hot climates

on organic life — & man —

Diseases there —  
Liver — stomach — bowels — Malaria

10. Effects of Cold cl. —  
Scurvy — Typhoid fever —  
in man — Diseases

11. Temperate Climates

Best for highest human devel.

opment — Man original subtropical  
Can climates change? — but — etc.

12. 13. Acclimation — especially as to rain, etc.

Easy often — sometimes almost  
impossible.

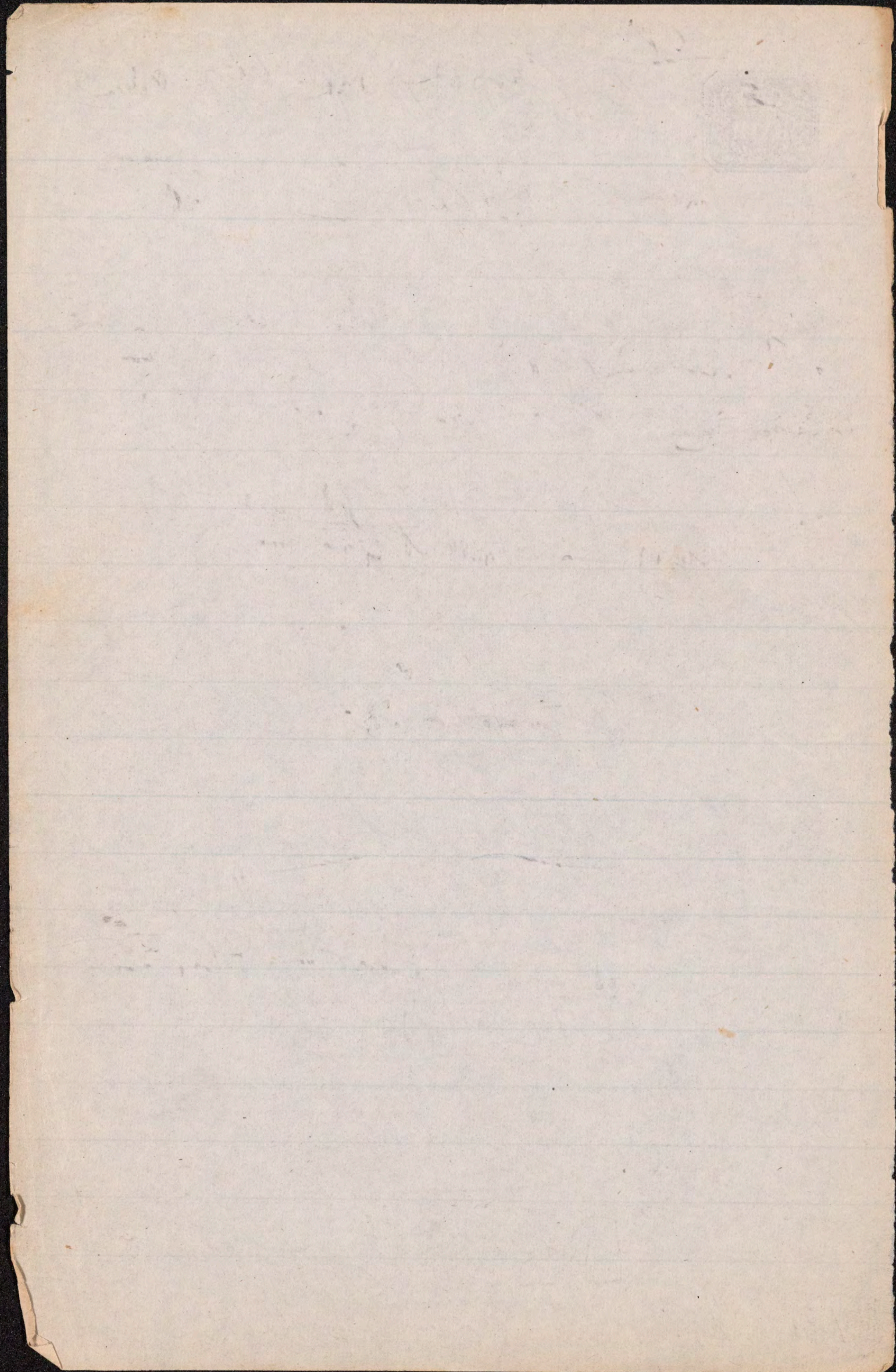
[Race accl. — negroes —]

14. Is man cosmopolitan by nature?

Agave 47° 42' —  
Mexico

67° 42' — 56° — As







15. For the answer to this  
we must appeal to  
ethnology. Is man one  
species, or several?

Bible does not finally settle it.

15 The argument is —

1<sup>st</sup> anatomical.

2<sup>nd</sup> Reproduction —

3<sup>rd</sup> Compar. Nat. History,

as to variabilities —

Agassiz & Darwin —

[Dog — Pigeon — Horse — &c —]

4<sup>th</sup> History —

5<sup>th</sup> Traditions —

6<sup>th</sup> Languages —

all point Asia  
Celtic — Deluge —  
Sacrifice —  
Circumcision —

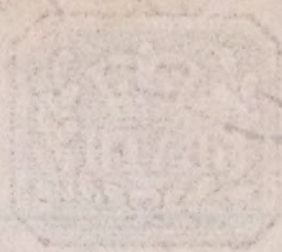
Indo-European  
Sanskrit — Gr. — Lat.  
Semitic — Heb. — Arab.  
Chinese — &c.

words of all continents.

present

language







7 3/4  
Horton  
& americ.  
Egypt  
Lang. & Time.

7 1/2 Gradations.

7 1/4 Conced. with climatic  
isothermal lines.  
Draper.

8th  
9th  
Authorities

Humboldt

W. Humboldt

Owen — Lyell — Prichard —  
Pickering, U.S. Expl. Exp.  
& most others

Quatrefages  
Huxley  
Lubbock

Compar. of Physio.  
of European & American  
Americans & Negroes

Darwin's theory

Nervus Aegrotus,  
See Prof. Allen.

10 — Acclimation is

negroes to malar. & M. fever an ex. of race  
M. fever in indians. Negroes  
possible. On what

management?

Food — clothes — work

gradual changes —

The 5 Continents — Guyana (Ventrone Race)

Climates for Phthisis —

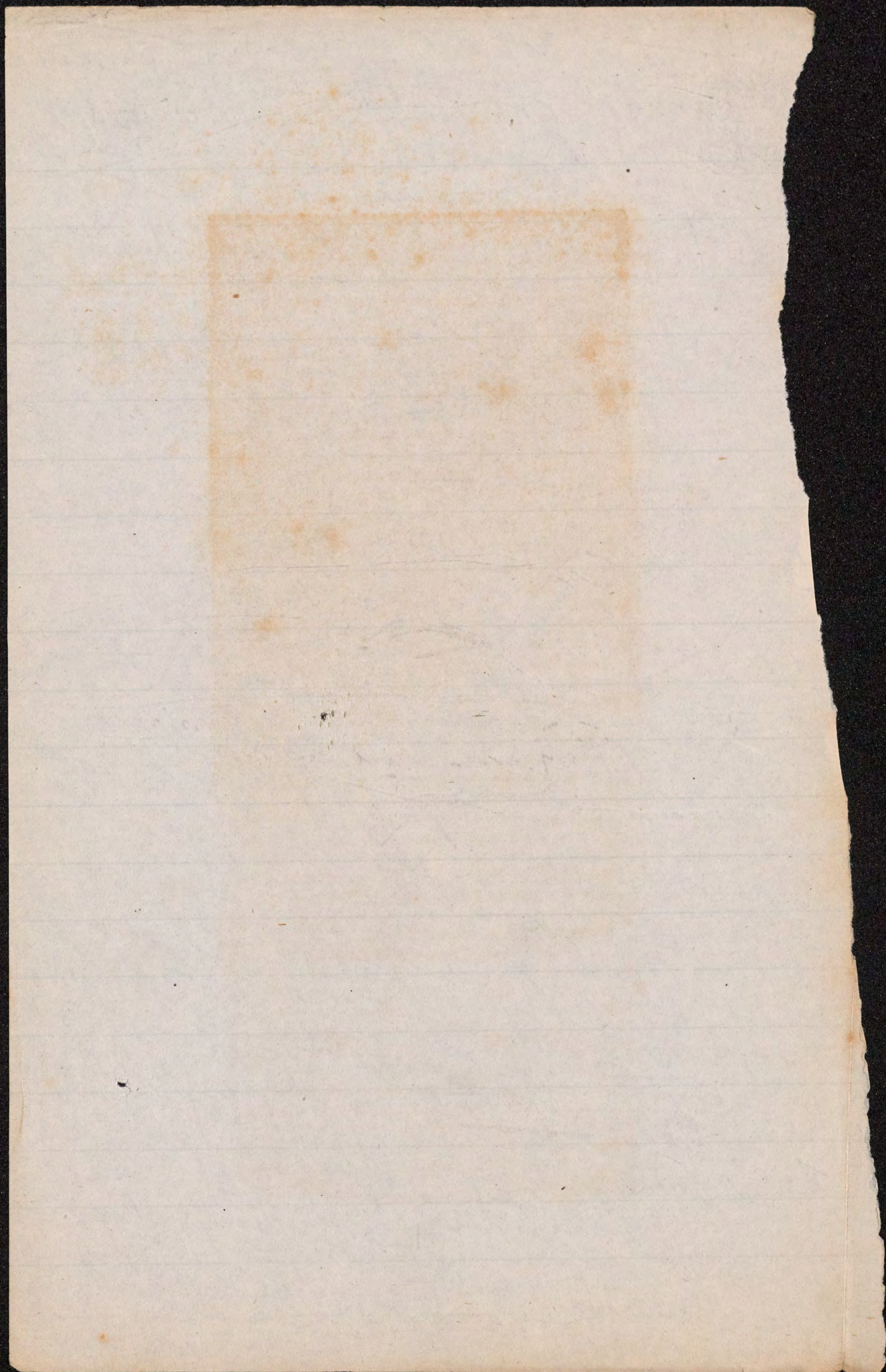
Statistics & elements of best; —

Egypt — Algeria — Si. Iran — Si. Italy —  
(Malta Madeira —

Cuba — Florida — Lake Superior —

Florida Newport by seasons. —







## WHAT BRINGS DEATH INTO THE CAMP.

Dr. WOODWARD, of the Surgeon-General's bureau, at Washington, has made a brief report on some of the more important facts concerning the influence of season and region on the camp diseases of the army. It refers to the first year of the war, ending June 30, 1862, the statistics of that year being all that are yet reduced into publishable form. From this brief but interesting precursor of the great work in course of compilation we learn a number of facts of high importance, and worthy of general attention.

The general mortality rate of the armies of the United States during the first year of the Rebellion, was 67·6 per thousand of the average strength of those armies for that year. This rate includes deaths from wounds and injuries, as well as from disease. The mortality from disease alone was 50·4 per thousand; from wounds and injuries, 17·2 per thousand. Very few persons would have believed that *three* of our soldiers die of disease for every *one* killed in battle.

The results from disease alone are contrasted with the annual mortality rates in the United States army at other periods, and with those of the British army during the Crimean war. During eighteen years of peace in our army the rate was 24 per thousand; in the Mexican war it was 103·8 per thousand; in the British army during the Crimean war it was 232 per thousand, and in the British army in 1859, during peace, it was but 9 per thousand. From this it appears that, although the mortality rate of our army from disease alone, during the first year of the war, was much greater than that of our own army or the British army in time of peace, it was far less than that of either of those armies during the Mexican and Crimean wars.

Dr. WOODWARD's little pamphlet is illustrated by diagrams and tables, which present the whole subject of disease in the army, *comparatively, by season and region*, at a single glance. To enable him to make these instructive comparisons he has considered the armies of the United States as consolidated in three great divisions. The first consists of troops operating on the Atlantic coast between the Apalachian range and the sea, thus including the Army of the Potomac and the coast expeditions; the second consists of the troops operating in the Central basin of the Continent, between the Apalachian range and the Rocky Mountains, including Western Virginia, Kentucky, Tennessee, Missouri, Kansas, &c.; and the third consists of the troops on the Pacific slope. In the first, or Atlantic division, the mortality rate from disease alone was 33·40 per thousand; in the second, or Central division, it was 82·19 per thousand; and in the third, or Pacific division, it was 10·76 per thousand. Thus it will be seen that the mortality from disease was two-and-a-half times as great in the Central region as in the Atlantic region, and three times as great in the latter as in the Pacific region.

These results demonstrate the superior healthfulness of the Pacific slope, for the mortality there is much less than was ever known in the whole United States army in time of peace; and they at the same time show that the greater mortality of the central region over the Atlantic region have a close relation to the malarious diseases which prevail in the valley of the Mississippi and its tributaries. In our armies in the central division these diseases develop themselves in the prevalence of camp fever, intermittent fever and diarrhoea.

The tables and diagrams presented by Dr. WOODWARD not only show these strong contrasts of the *annual* mortality rate from disease in our armies according to locality, but they exhibit comparisons as clearly according to *seasons*. But the subject is too broad to be considered further in a brief notice like this. Our only purpose in making it is to lay before the public one or two of the principal points, as we have done above, and to note the fact that an elaborate work is in preparation that will have a profound interest for the professional world and for the public at large.



# AT THE BREAKWATER.

Ships Sebastopol, Savin, and Frank Boulton, moored, both from Pensacola, for orders.

## CLEARED YESTERDAY.

Steamer Ashland, (transport) Esling, Point Lookout, via Chester, A. Boyd; barque Washington Butcher, Collins, Matanzas, Workman & Co; brigs Thos. Walters, Westerdyke, St. Kitts, Jaureche & Laverne; Lapwing, (Br.) Creamer, Pernambuco, John Mason & Co; schrs C. A. Stetson, Stevens, Wellfleet, Noble, Caldwell & Co; Jos. Porter, Burroughs, Boston, Reppier & Bro; J. S. Bright, Shaw, Salem, E. A. Quintard; J. H. Sharp, Robbins, Boston, C. A. Heckscher & Co; Summit, Freeman, Braintree, Castner, Stickney, & Wellington; D. C. Smith, Long, Provincetown, W. H. Johns; Neptune, Clark, Boston, Blakiston, Graff & Co; A. Corson, Tunnell, Washington, H. A. Adams; Martha Maria, Norwood, Lynn, E. A. Souder & Co; Lath Rich, Bonhoff, Port Royal Curtis & Knight; Hiawatha, Disney, Salisbury, C. F. Norton & Co; James Magee, Lynch, Georgetown, J. R. Tomlinson; L. & R. Smith, Smith, Boston, John Street; Mary Tice, Tice, Washington, Tyler, Stone & Co; W. Kennedy, Christy, do; Sylvester Gessner, Thompson, Annapolis, do; Ida V. McCabe, Pickup, Alexandria, do; Charm, Star, do; Rhodella Blew, Peterson, Fortress Monroe, do; Mary H. Banks, Marts, do; John Rogers, Tyler, do; steamer Swan, Rose, Sassafraz River, Captain; J. S. Shriver, Dennis, Baltimore, A. Groves, Jr.

## MEMORANDA.

Ship Rattler, Almy, from San Francisco 24th June, for Boston, was seen 30th ult. off Nantucket.

Brig G. F. Greery, Conklin, cleared at New York 2d inst. for Philadelphia.

Brig Emma, Baker, hence at Boston 2d inst.

Brig Geo. F. Lovett, (Br.) for Philadelphia, was loading at Cienfuegos 3d ult.

Schrs Sarah Cullen, Cullen; Abigail Haley, Haley; John Dorrance, Rice; J. H. Moore, Nickerson; Maggie Van Dusen, Garrison; Jane C. Patterson, Hand; Alex. Young, Young; J. H. Burnett, Ireland; Robt. Corson, High; Ann Gardner, Knowles, and W. G. Audenried, Hewitt, hence at Boston 2d inst.

Schr M. Sewell, Hoyt, cleared at Boston, 2d inst. for Philadelphia.

Schrs Sydney Price, Godfrey, and Vashti Sharp, Haley, hence at Salem 30th ult.

Schr C. P. Stickney, Garwood, hence at Fall River 28th Sept.

Schr North Pacific, Marcy, hence at Providence 30th Sept.

Schr Martha Collins, Shrouds, sailed from Providence, 30th ult. for Philadelphia.

Schr Charles H. Rogers, Langley, hence at Newburyport 29th ult.

Schr W. H. Morse, Benton, hence at Taunton 28th ult.

Schrs Ceres, Timmonds, and Fly, Cheeseman, for Philadelphia, sailed from Nantucket 23d ult.

Schr J. Grierson, Harding, from Providence for Philadelphia, at Newport 29th ult.

Schrs Governor, Fletcher, and New Zealand, Perham, hence for Boston, at Edgartown 26th ult.

Schr Z. Stratton, Stephens, sailed from East Greenwich 30th ult. for Philadelphia.

Schrs Leonesa, Hupper, and Amy, Foster, Larkin, cleared St. John, NB, 26th ult. for Philadelphia.

## MUSIC, DANCING, &c.

J. K. MACGOWAN, TEACHER OF SINGING, No. 300 J. S. THIRTEENTH Street.

BALLAD SINGING.—MR. BISHOP WILL RECEIVE Pupils, Oct. 5th, No. 1632 FILBERT Street.

CHR. THEIN, TEACHER OF PIANO AND VIOLIN, No. 1424 RACE Street, has resumed his lessons.

E. THORBECKE, TEACHER OF THE PIANO Forte, No. 1902 PINE Street. At home daily at 2 o'clock.

NORMAL MUSICAL INSTITUTE, No. 624 N. ELEVENTH Street, Philadelphia. JOHN BOWER, Principal. Third annual term now opened.

SIGNOR CORTESI WILL RESUME THE SINGING Lessons on the 15th inst., and the Class for beginners on the 1st of October. Residence, No. 1003 WALNUT St.

ALEX. M. GOLDSBOROUGH, ORGANIST AND Pianist (Organist of St. Paul's), Third and Walnut, Teacher of Music, removed from No. 717 Arch to No. 2101 BRANDYWINE Street, corner of Twenty-first, half square below Green Street.

DANCING, ETIQUETTE, EXERCISES IN PHYSICAL Development, Elegance of Deportment, &c.

Mrs. BEECH will reopen her academy at the elegant ball room, S. E. corner of BROAD and SPRING GARDEN Streets, on Saturday, the 19th, where she will introduce and teach all the new and fashionable dances of the season. Days, Wednesdays and Saturdays, at 3 o'clock P. M. References from the first families in the city.

M. C. CAMPBELL'S DANCING CLASSES, WASHINGTON Hall. Entrance, No. 810 SPRING GARDEN Street.

All the fashionable dances in one course of lessons. Ladies meet Wednesday, 3 to 5; Friday, 7 to 10. Gentlemen, Tuesday, Friday and Saturday evenings. Children, Wednesday and Saturday, 3 to 5. Stage Dancing taught rudimentally. Private lessons at hours not occupied by classes. Soirees every Tuesday and Saturday evenings.

PRIVATE DANCING SCHOOL.—MADAME EGERIE JULE MARTIN, aware that many parents object to their children attending public dancing academies, will open Private Classes at her residence, No. 1346 SPRUCE Street, on Monday, October 5th, where visitors are not admitted. She will give every attention to dancing and deportment.

## CLASSES, DAYS AND HOURS.

For young Ladies and Masters, on Mondays, Wednesdays and Fridays, from 3½ until 5½ o'clock, P. M. Independently of her Classes Mrs. Martin will give lessons in private families, and at all the Schools where Mr. Martin had the honor to teach. Should ladies, with parents or friends, like to learn any new Dance separately, Mme. Martin will make arrangements for them. For Circulars, apply to Madame Martin's residence.

## WIGS, TOUPEES, &c.

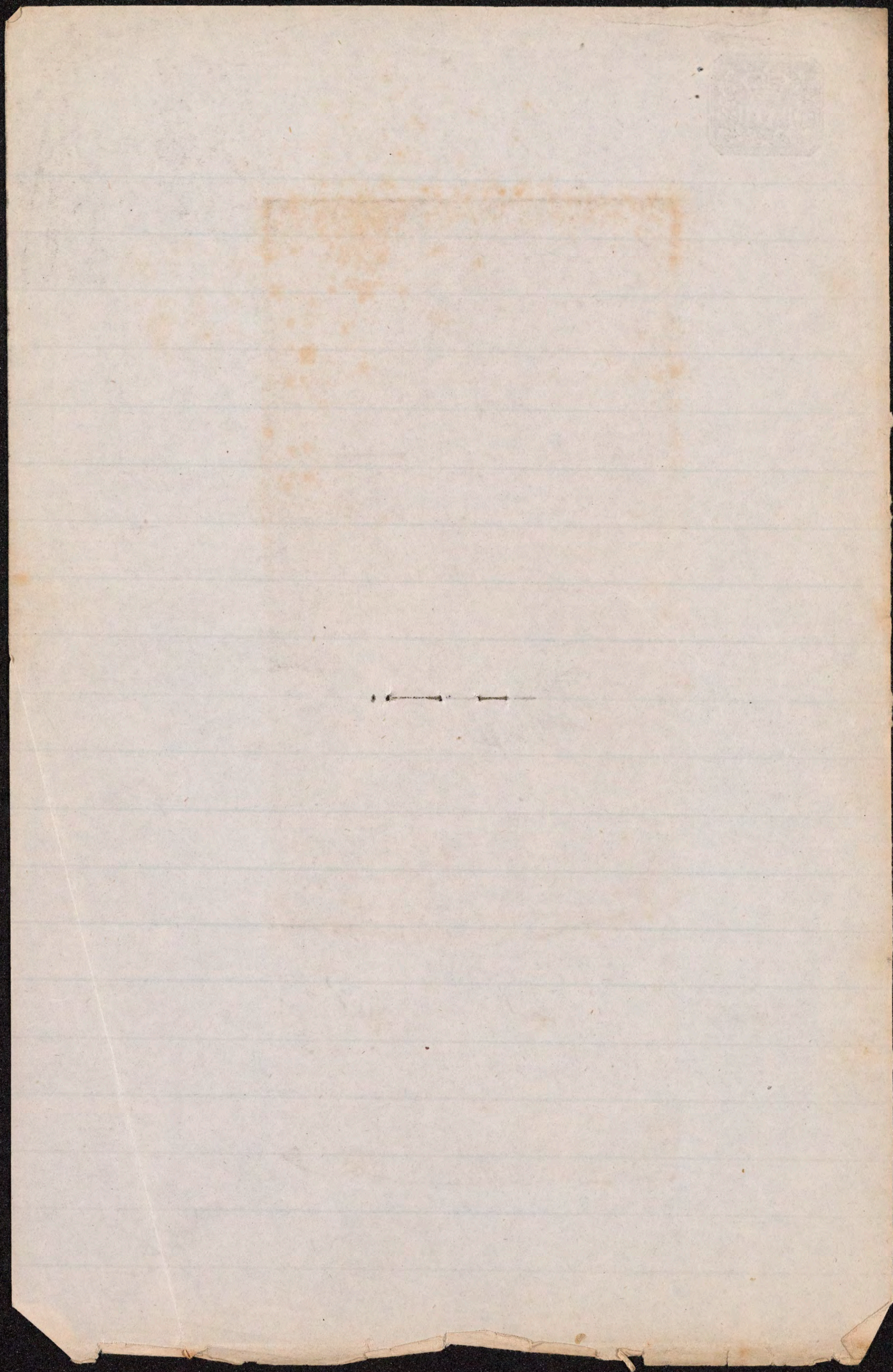
CKMAN'S UNRIVALED VENTILATING WIGS and Toupees, Ladies' Long Hair Braids, Half Wigs, Bands, &c., cheap. No. 924 CHESNUT Street.

LADIES' HAIR BRAIDS, WIGS AND CURLS OF every description. A large assortment on hand at the best possible prices. M. HUTOIS, No. 213 S. NINTH Street, below Walnut.



Climatology of the United States.







Inflammatory — & Malarial regions.

Medical Topography of U.S. &c.  
3 regions — Atlantic, Middle, Western;  
2, 1, 3, in unbroken

Zymotic localized Diseases —

Malarial Fever —

degrees; in prop. to latitude &c.

Mellon Fever —

Dengue — S. U. S.  
(& E. Indies? Filken.)

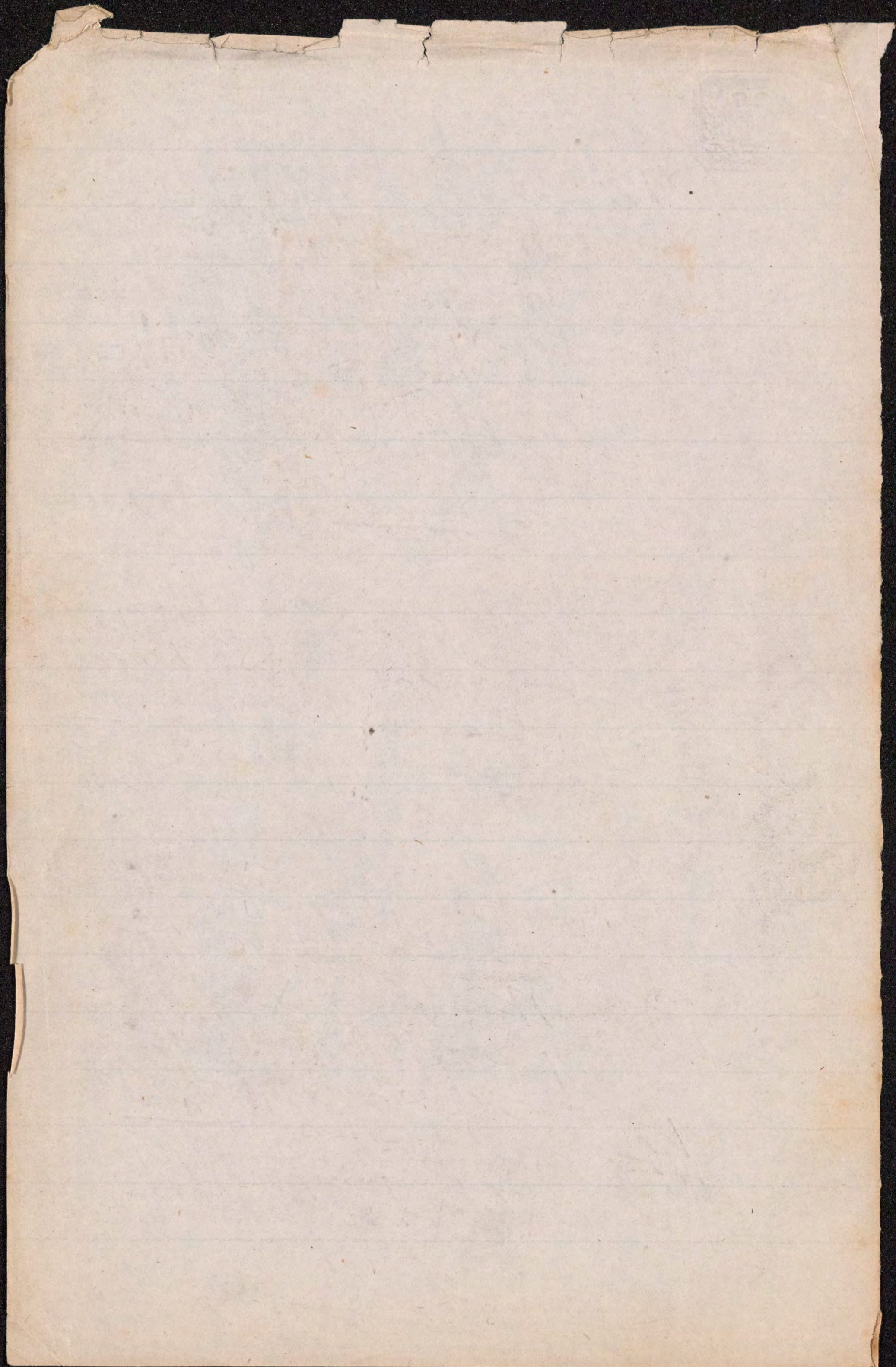
Dysentery —

Typhoid Fever —

Arctic — & "Mountain fever"  
Hammond

Relapsing fever of E. Britain, Russia &c.  
"Tanna fever"  
Plague, of the Orient











~~Notes out~~

Circulation next.

Harding's notes, or Campbell's

Sham

Exercises